

# **Report on the City of Chicago's MWBE Program**

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**Final Report**

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## Executive Summary

The City of Chicago has maintained an affirmative action program in construction since 1985, with the stated purpose being to 'remedy ongoing discrimination and the effects of past discrimination against women and minority groups, so as not to be a passive participant in such discrimination'. On June 28<sup>th</sup> 2004 the City adopted a new program with biannual, aspirational goals for the award of construction contracts and subcontracts to Minority Business Enterprises (MBEs) of 24 per cent of the annual value of all construction contracts and 4 per cent to Women-owned Business Enterprises (WBEs). The ordinance is set to expire on December 31<sup>st</sup> 2009, 'unless the city finds that its remedial purposes have not been achieved and there is a continuing compelling interest in continuing narrowly tailored remedies to redress discrimination against MBEs and WBEs so that the city will not function as a passive participant in a discriminatory marketplace'. This report provides evidence relevant to determining whether the program should continue past the sunset date at the end of 2009. **I argue that it should.**

I cover twelve main areas.

### *1) Background economic conditions.*

The main background to this report is the fact that the US economy entered a very significant recession at the start of 2008. That economic decline started in the sub-prime mortgage market was centered in the construction industry in particular and broadened out to the US economy as a whole and eventually to the world economy. House prices have fallen sharply; foreclosures are on the rise; housing activity including permits to build and new starts have dropped precipitously. Commercial property prices and activity have fallen. Residential construction has been hardest hit, but commercial construction has also taken a heavy hit. The collapse of private sector construction has been dramatic. In December 2008 public sector construction, state, local and federal, accounted for 30.0% of the total, up from 23.8% in March 2007. A weak housing market impacts negatively on the availability of work for all construction firms. Public sector contracts becomes even more important in recessions, especially for firms owned by women and minorities.

The labor market has also experienced a rapid loosening. Non-farm payroll employment fell by 539,000 in April 2009. Construction employment has been hit especially hard. Total non-farm employment has fallen by just over five million over the year while construction employment has fallen by approximately one million. The unemployment rate now stands at 8.9% but is considerably higher for blacks (15.0%) and Hispanics (11.3%). The recession is hitting construction workers and minorities especially hard. A group that is likely to be among the hardest hit are the overlapping set - minorities in construction.

### *2) Changing demographics in Chicago.*

The population of both the City of Chicago and Cook County are markedly lower in 2007 than they were in the 2000. A high proportion of minorities live in and around the City of Chicago. The numbers of non-Hispanic whites living there has declined over time as they have moved to the suburbs. The percentage African-American has also declined.

There has been a large influx of Hispanics. The percentage of the City of Chicago's population that is Hispanic doubled from 14% in 1980 to 28% in the latest data available for 2005-7. The percent of the population in poverty or foreign born is rising. In the six county area covered by the ordinance 20% of the population are African American; 6% Asian; 55% white alone and 2% other races.

*3) What is special about the construction industry?*

Approximately six per cent of workers in the United States, hold a construction job. An important feature of the construction industry is that activity in the sector is highly cyclically volatile. Employment rises more rapidly in booms and falls more rapidly in slumps than in almost any other industry. The existence of many subcontractors is a special feature of the construction industry. It is well known that small construction companies can also expand rapidly as demand changes by hiring workers and renting equipment. Subcontracting is one important source of this flexibility. Entry into the construction industry is not difficult and the vast majority of firms in construction are small. Employment in the construction industry is dominated by white males. Females, blacks and Asians are less represented in construction and extraction occupations than they are in total employment nationally. In contrast, Hispanics are over-represented. They account for 14% of overall employment but 30% in construction. The construction sector is and will continue to be especially hard hit as the recession progresses. It is well known to be an industry subject to boom and bust - it is now in a 'bust phase'.

*4) Entrepreneurship, Self-employment and Small firms.*

Data on the characteristics of firms owned by *minorities* are available from the 2002 Survey of Business Owners suggest that minorities owned approximately 18 percent of the 23 million U.S. firms. Blacks owned 5.0 percent of all U.S. firms, 1.8 percent of employer firms, and 5.9 percent of non-employer firms. Asians and Islanders owned 4.7 percent of all U.S. firms, 6.1 percent of employer firms, and 4.3 percent of non-employer firms. For comparison purposes, the percentages for Whites are 82.9, 88.0, and 81.4 respectively. The vast majority of minority-owned construction firms in Chicago are small. Only 13% have employees. Of the 2,770,888 firms in construction in Chicago construction, 2.4% were owned by African Americans; 7.0% by Hispanics; 1.1% by American Indians or Alaskan natives; 1.4% by Asians and Pacific Islanders and 10.5% by women. The representation of minorities in particular among the ownership of firms in construction is well below their representation in the population as a whole. African Americans and Latinos are substantially less likely to own a business than are whites and Asian Americans. Trends in minority business outcomes, I argue, do not indicate improvement relative to white business outcomes in the past two decades.

*5) The Construction Industry and Affirmative Action Programs.*

There is a good deal of evidence to suggest that the under-representation of women and minorities in construction especially is due to widespread and pervasive *discrimination* that has changed little over time. Not only is the proportion of firms owned by African Americans especially relatively low, so also are their representation in the construction workforce in general and in self-employment in particular. Where firms owned by minorities and women do exist in construction they are more likely than non-minority

males to be in special trades rather than heavy and civil. They are also more likely to be sub-contractors than prime contractors. I argue that this does not appear to be because of a lack of ability to expand to undertake these activities because it is well-known that small construction companies can expand rapidly as demand changes by hiring workers and renting equipment and making use of sub-contractors.

*6) Empirical evidence on the incidence of self-employment.*

In this section I examine the probability of an individual being self-employed in the US, US construction and Chicago construction using data from the Current Population Surveys, the 2000 Census and the 2007 American Community Survey. The main findings are that minorities and women continue to have significantly lower self-employment probabilities in Chicago construction, holding constant their characteristics, than if they were white males with identical characteristics.

*7) Self-employment earnings and wages.*

It is apparent that there remain considerable disparities in the self-employment rates and earnings of white males and minorities and women. These differences are especially pronounced in construction. It appears that there was some improvement in the gap in self-employment rates between white men and blacks and Hispanics in particular during the 1980s and early 1990s when affirmative action programs were implemented by many public sector jurisdictions. Subsequent to the US Supreme Court decision in *Croson* in 1989 there was some widening again of this gap.

*8) Liquidity constraints.*

There is a growing academic literature suggesting that entrepreneurs in general and minority owned-firms in particular face liquidity constraints. I report the results from a special telephone survey conducted for the City of Chicago on discrimination in the local credit market. Responses were received from 400 firms of which 248 were owned by white males. The main findings were as follows. (i) Minorities were especially likely to report difficulties with bonding and obtaining working capital. (ii) African American owners were especially likely to say that *the single most important problem facing their business was* 'financing and interest rates'. (iii) There are significant differences in denial probabilities for all races and white women in Chicago construction. In addition, the City of Chicago commissioned further analysis of anecdotal evidence of Asian, Hispanic and African-American business owners. Separate reports prepared to summarize findings and conclusions drawn from the interviews of Asian, Hispanic, African American and white female business owners are attached hereto, and incorporated herein, as Group Exhibit C. These interviews with the participants in the market fully support the findings from the Chicago survey and the national data. **Based on both quantitative and qualitative evidence there appears to be discrimination in the small business credit market towards African Americans and Hispanics in particular and to white females and Asians to a lesser extent in Chicago construction.**

*9) Trends and prospects for small businesses*

Economic conditions facing small businesses generally deteriorated through 2008 and especially in the final quarter. Small business bankruptcy filings were up in 2007

compared with 2006. Lending standards were tighter and there was less demand for loans. Business optimism was strongly down. Small firms were pessimistic about expanding. They were also cutting back on hiring. Self-employment had started to fall. Significant difficulties remain in obtaining credit. The prospects for small firms in 2009 are bleak. They are especially bad for small construction firms.

*10) Availability of firms.*

We obtained data from Dun and Bradstreet which allowed us to calculate the percentage of construction firms in the relevant geographic area that were owned by women and minorities. We added data from the lists of certified MWBEs and DBEs from a number of sources including the City of Chicago and others. We identified a major problem with the racial classification for the smallest firms in the database, which does not seem to have been noticed before. The consequence of this problem suggests that there is a considerable undercount of the true proportion of MWBEs in the D&B database for the smallest firms with less than five employees. Once adjustment is made for this undercount the estimated availability is 25.1%, made up as follows White males (74.9%); White females (11.8%); Blacks (4.2%); Asians (2.1%); Hispanics (6.9%) and Natives (0.1%)

*11) Goal percentages and utilization of minorities*

Closed City contracts totaling nearly \$471 million were examined to determine how the City was spending its money. A sample of 35 contracts were examined that were associated with City of Chicago MWBE construction contractors. Firms owned by MWBEs were contracted to receive \$143,768,283 of work under these thirty five contracts. Data were obtained from the three largest City departments for construction: Department of Transportation; Department of General Services and Department of Water Management. The data relate to the three fiscal years 2006-2008. These thirty-five contracts were limited to those that were funded *entirely* by the City of Chicago and not projects funded in whole or part by federal funds. Hence they did not have any DBE goals on them but all had MWBE goals. Based on the contracts we examined, over the period the Department of Transportation contracted for 31.8% of its total spend to be to MWBEs, while the Department of Water management contracted for 30.8% and the Department of General Services 34.1%. We also examined these contracts to determine SIC codes so that we could determine the sectoral weights of the City's construction spending. Imposing these weights gives an overall availability estimate of 24.7% for the six county area, little changed from 25.1% estimated above.

*12) Conclusions and recommendations.*

The main backdrop to this report is the very serious recession that is hitting the US economy which has hit construction and minorities especially hard. At this time public spending is likely to be the life blood of many small businesses who would struggle to survive on the slim pickings available from private sector work. For many small construction firms that is especially likely to be true given that the home building sector is in deep recession. I argue that excluding a group from the program or reducing the goals at this time might well be fatal for many small businesses who need the work provided by the City's MWBE program.

My main conclusion is that, in my view, there remains a basis in the evidence to justify the existence of a goals program. This evidence suggests that discrimination continues to exist in the Chicago construction market. It is exacerbated by discrimination in the credit market that acts as a market failure, which means this discrimination persists. Firms owned by minorities, and to a lesser degree ones owned by white women are unable to obtain loans when they apply for them, even with the same characteristics as white men. When they do get them they have to pay higher interest rates. When banks do not know the race of the owner, there is no difference suggesting this is not due to omitted variable biases but rather to discrimination. The City of Chicago in my view is then justified in maintaining its goals program. There is **no evidence** that I have seen that suggests that, in comparison with my earlier reports to the City, the observed discrimination has diminished over time.

Hence I recommend that the City of Chicago proceeds as follows and adopts the following recommendations.

**Recommendation #1**

Given the magnitude of this recession, which is likely the most significant for a century, I recommend that the goals in construction remain as they currently are, as follows.

|                         |     |
|-------------------------|-----|
| Total MBE goal          | 24% |
| Total WBE goal          | 4%  |
| Total MWBE availability | 28% |

My recommendation is that minorities are defined as - African-Americans or Blacks; Hispanics, Asians/Pacific Islanders and Native Americans. Firms owned by minority women could count against either the MBE or the WBE goals.

**Recommendation #2**

The onset of recession is likely to make things much worse for Asian-owned firms to survive in the Chicago construction industry. This is not the time to remove them from the program. I recommend revisiting this question of whether Asians should remain in the program once the current economic maelstroms come to an end.

**Recommendation #3**

I recommend the area covered by the program is expanded from the six county area to the broader Chicago, IL Primary Metropolitan Statistical Area (PMSA) also called the Chicago-Naperville-Joliet, IL Metropolitan Division. This means adding DeKalb County, Grundy County and Kendall County.

**Recommendation #4**

In addition I recommend that the counties of Lake and Porter from Northern Indiana be added to the program.

**Recommendation #5**

I recommend the City immediately looks into the possibility of implementing programs of 'fast pay' and 'direct-pay' assuming that any legal issues can be resolved. These proposals are intended to help level the playing field for the City's construction sub-contractors who are being particularly hard hit by the credit crunch and the decline in the private construction industry, both residential and non-residential.

**Recommendation #6**

I recommend that the new Ordinance be put in place until the end of 2015. I further recommend that an interim review be undertaken by the end of 2012 to allow for an examination of the impact of the recession.

## **PROFESSIONAL QUALIFICATIONS**

My name is **David Graham Blanchflower**. I came to Dartmouth College from the UK as an Associate Professor with tenure in 1989. I was promoted to full Professor in 1993. I was Chairman of the Department of Economics at Dartmouth College from 1998-2000. From 2000-2001 I was the Associate Dean of the Faculty for the Social Sciences. I was appointed the Bruce V. Rauner Professor of Economics in July 2001. Between June 2006 and May 2009 I was a Member of the Monetary Policy Committee at the Bank of England. That is the equivalent of being a member of the Board of Governors of the Federal Reserve: each month I was one of nine people in the UK who voted on the level of interest rates. I was appointed to this post by the UK Prime Minister, Gordon Brown. I was previously a Research Officer at the University of Warwick and a Lecturer (Assistant Professor) at the University of Surrey, both in the UK. I am also currently a Research Associate at the National Bureau of Economic Research (NBER) in Cambridge, Massachusetts, USA and a Research Fellow at CESifo at the Centre for Economic Studies at the University of Munich in Germany. I am Program Director in the 'Future of Labor' Program at The Institute for the Study of Labor (IZA) at the University of Bonn in Germany. I am also a visiting professor at the University of Stirling in Scotland.

I served on a commission of three foreign experts appointed by the government of Sweden to examine the workings of the Swedish labor market. I have given evidence on labor market issues to the British Houses of Parliament as well as to the Congressional Budget Office Panel of Economic Advisers and House and Senate Committees in the State of Maryland. I have worked as an economic adviser to a committee of Inquiry in the UK looking into regional variations in pay. I acted as consultant for the New York State Judicial Pay Commission regarding how to set the pay of New York state judges.

I have conducted labor market research for the British Department of Employment and the Department of the Environment; the US Department of Labor; the Organisation of Economic Cooperation and Development (OECD) in Paris, France and the International Labour Organisation in Geneva, Switzerland. I have also acted as consultant to advise on the setting of pay of executives for both the Farm Credit Administration and the Board of Governors of the Federal Reserve. I have advised on labor market issues for a number of private sector firms in the US including Microsoft and Visa and in the UK (London Electricity and Tesco). I also acted as a consultant on the effects of globalization on the US economy for the US Federal Trade Deficit Review Commission. I have been invited by the OECD to give the keynote address to a 'High-Level' meeting of OECD employment ministers in Paris in October 2009. The topic of the forum and the ministerial meeting is the labour market policy response to the crisis. My keynote address is intended to set the scene and link the macroeconomic and labour market policy responses.

I obtained my BA in Economics from the University of Leicester, England, my M.Sc. from the University of Wales, and a postgraduate teaching certificate (P.G.C.E.) from the University of Birmingham, England. I taught in schools and local colleges for five years before returning to university to pursue graduate studies. I obtained my PhD from the University of London (Queen Mary College) in 1985. I took courses in statistics and



advanced statistics during my undergraduate studies and took additional courses in statistics and econometrics while pursuing my master's degree. I was awarded an honorary M.A. from Dartmouth College in 1996. I was also made an honorary member of Phi Beta Kappa in 1996 in recognition of "high attainments in liberal scholarship." In 2007 I was awarded an honorary Doctor of Letters (D.Litt.) for 'services to economics' at my alma mater, the University of Leicester, in the UK. In June 2009 I am to be awarded an honorary Doctor of Science (D.Sc.), at Queen Mary, University of London. In the Queens' Birthday Honors List in June 2009 I was awarded the Commander of the Order of the British Empire (CBE) for my 'services to economics and the Monetary policy Committee'.

Since receiving my Ph.D. I have published one book, edited another book, numerous monographs and reports and over one hundred and fifty articles or book chapters. My publications have appeared in the *Quarterly Journal of Economics*, *The Economic Journal*, *Industrial and Labor Relations Review*, *The Journal of Economic Perspectives*, *The European Economic Review*, *The Journal of Public Economics*, *The Journal of Health Economics*, *Social Science and Medicine* and *The Journal of Labor Economics*, among others. My book *The Wage Curve* (co-authored with Andrew Oswald) received Princeton University's Richard A. Lester Prize for "the most outstanding book in Industrial Relations and Labor Economics published in 1994". My paper with Richard Freeman, ('Going different ways: unionism in the US and other OECD countries', *Industrial Relations*, Winter 1992, pp. 56-79 reprinted in *Labor Market Institutions and the Future Role Of Unions* edited by M. Bognanno and M. Kleiner, Blackwell, 1992) also won a prize from the Hubert Humphrey Center at the University of Minnesota in 1991/2. My work is widely cited in the labor economics literature: it is also cited to a lesser degree in the legal literature. My vita and many of my papers are downloadable from my website at: [www.dartmouth.edu/~blnchflr](http://www.dartmouth.edu/~blnchflr) and is attached as Exhibit A.

I was named the 'Business person of the year' by the UK national daily newspaper *The Daily Telegraph*, in their **Great Britons of 2008** awards on 30<sup>th</sup> December 2008. The citation was as follows.

"Not only did David Blanchflower foresee the scale of the recession months before the eventual impact, he attempted to do something about it. He was the one Bank of England executive who consistently argued in favour of dramatically lower interest rates. He was the first policy-maker from the Bank, Treasury or Financial Services Authority to warn that the UK faced recession and the possibility of house prices falling by a third. Blanchflower has decided against taking up a second three-year term on the MPC; the Bank of England will be the weaker for his absence."

[\(http://www.telegraph.co.uk/topics/great-britons/\)](http://www.telegraph.co.uk/topics/great-britons/)

A lead editorial in the Guardian newspaper Wednesday 25 March 2009 commented on my contribution at the Bank of England.

## **Editorial: In praise of ... David Blanchflower**

"Even if he had not become the Bank of England's biggest dissenter - the Threadneedle One - David Blanchflower would still have been a remarkable economist. His academic interests lie in jobs and wages and happiness - stuff that actually matters to lay people, but which researchers usually ignore, to spend more time with their dynamic stochastic general equilibrium models. He can translate findings into non-academic language, as befits someone who last year described his research technique to this paper as "the economics of walking about: you ask people what's going on in their lives and you take seriously what answers they give you". His stint on the Bank's monetary policy committee brought Professor Blanchflower into the public eye. He was the first on the MPC to spot the seriousness of the credit crunch, and for a long time the only one to advocate cutting rates in response. The Bank may be operationally independent, but outspokenness is not necessarily prized in its staff. The professor was much ridiculed, yet kept on standing out until everyone else caught up. The course of this crisis would have been very different had others shown such intellectual courage. Professor Blanchflower was at it again last night, with a speech that criticised as "utopian" the typical assumptions of central bankers that markets are perfect and people always rational. That combination of intellectual pedigree and plain common sense will be much missed when he steps down from the MPC this spring."

<http://www.guardian.co.uk/commentisfree/2009/mar/25/in-praise-of-david-blanchflower>

In 2008 the City of Chicago hired me as an expert. I am being remunerated at the rate of \$500 per hour.

### **Cases in Which I Have Been Retained**

I have worked as an expert for a number of jurisdictions in relation to litigation with respect to minority and women-owned business programs. I also worked for the US Department of Justice on the Sherbrooke Turf v. State of Minnesota DOT, USDOT and the US Department of Justice as intervenors and Gross Seed Company v. State of Nebraska DOT, USDOT and the US Department of Justice as intervenors. I was retained as an expert by the City of Chicago in the case of BAGC v. City of Chicago as well as in other matters related to minority contracting. I have acted as a consultant for a number of state Departments of Transportation (Texas, Maryland, Nebraska, Minnesota, Illinois, Missouri, Massachusetts and Washington) as well as the cities of Denver, Chicago, Jacksonville, San Francisco, St Louis, Baltimore and Chicago METRA, Chicago Public Schools and the Chicago Pier and Exposition Authority in relation to minority contracting.

I was retained as an expert for the City of New York in two impasse dispute over pay with the Patrolmen's Benevolent Association and testified at two arbitration hearings. I also worked as a consultant for the City of New York in a pay dispute with its teachers. I worked for Wayne County setting the pay of sheriffs and the City of Detroit regarding the

pay of teachers and police. I was an expert for the Wayne County/Westland School District in a dispute regarding the pay and conditions of teachers. I also acted as testifying expert to Chicago Public Schools.

I was retained in the State of Michigan by Wayne County Westland School District in relation to a dispute over teachers' pay and benefits. I have acted as consultant to a number of public sector authorities in the UK in relation to public financing including Thames Valley Strategic Health Authority; Worcestershire County Council; Croydon Council and the Associations of Local Government in London and the South East. I am currently acting as a consultant for Worcestershire County Council in regard to local authority financing.

### **Testifying**

I have testified as an expert at trial in the following cases:

a) *On the side of the plaintiff*

Colin Bridge v. Corning Life Sciences, Inc., d/b/a Corning-Bioran Laboratories.

b) *On the side of the defendant*

Concrete Works v. the City and County of Denver.

Gross Seed Company v. State of Nebraska DOT, USDOT and the US Department of Justice as intervenors where I also gave deposition testimony.

BAGC v. City of Chicago where I also gave deposition testimony on a number of occasions.

United States vs. City of Chicago Public Schools where I also gave deposition testimony.

### **Depositions**

I have given deposition testimony on the side of plaintiffs in the following cases filed in the State of New Hampshire Superior Courts:

Mary Bartlett, Kathleen Traynor Quint, Richard Quint Jr., Francine Brooks, Harold Brooks, Jr., Michael Burke, Leigh Burke, Gordon DuBois and Bernadine Dubois vs. Mt. Washington Valley Associates Ltd. Partnership American Air Systems, Inc., American Air and James A. Droiu d/b/a Rush Custom and Rush Radiator (Docket: 95-C-47)

Estate of Gregory Lindsay vs. Suzuki of Keene, Inc., Scott Motor Sports, Marine/USA Suzuki, American Suzuki Motor Corporation (Docket: 95-C-0052)

Steven Meserve and David Tibbetts vs. Southwestern/Great American Inc., 1997. (Docket: 96-282-JD)

Janet O. Plummer and Douglas Plummer vs. Nancy Dirubo, ARNP Laconia Women's Health Center, Laconia Women's Health Center, G. Kenneth DeHart Jr., Lakes Region General Hospital, 1997.

I also gave deposition testimony on the side of defendants in a case in the Supreme Court of the State of New York, County of New York in the case of Kathleen O'Reilly, as executrix for the estate of Michael O'Reilly and in her own right, v. Robert A. Keasbey Company, et al, July 7, 2003. I also gave deposition testimony in the case of Sherbrooke Turf vs. State of Minnesota DOT, USDOT and the US Department of Justice as intervenors.

I also testified in front of the Senate and House of the State of Maryland on minority contracting. I have also testified in front of the Chicago City Council also on minority contracting.

As part of my work as a member of the Monetary Policy Committee at the Bank of England I have testified several times before the Treasury Select Committee of the House of Commons. I have also testified twice before the House of Lords Economic Affairs Committee.

## TESTIMONY AND OPINIONS

The City of Chicago has maintained an affirmative action program in construction since 1985, with the stated purpose being to "remedy ongoing discrimination and the effects of past discrimination against women and minority groups, so as not to be a passive participant in such discrimination" (City of Chicago MWBE substitute ordinance (p1, 2004). This program was challenged in the case of the Builder's Association of Greater Chicago v, City of Chicago no. 96 C 1122 (N.D. Ill.). Judge Moran held that the City has a compelling interest in implementing a remedial race and gender conscious affirmative action program but stayed the enforcement of the injunction until June 29<sup>th</sup> 2004 to allow the City to 'narrowly tailor' its program. On June 28<sup>th</sup> 2004 the City adopted a program with biannual, aspirational goals for the award of construction contracts and subcontracts to MBEs and WBEs of 24 per cent of the annual value of all construction contracts to MBEs and 4 per cent to WBEs. The program covered:

- A) A business enterprise located within the six county region of Illinois made up of Cook, DuPage, Kane, Lake McHenry and Will Counties,
- B) Minorities defined as - African-Americans or Blacks; Hispanics; individual members of other groups found by the city to be 'socially disadvantaged by suffering racial or ethnic prejudice or cultural bias within American society, without regard to individual qualities, resulting in decreased opportunities to compete in Chicago area markets or do business with the city' (Substitute ordinance, 2004, p.6).

The ordinance is set to expire on December 31<sup>st</sup> 2009, 'unless the city finds that its remedial purposes have not been achieved and there is a continuing compelling interest in continuing narrowly tailored remedies to redress discrimination against MBEs and WBEs so that the city will not function as a passive participant in a discriminatory marketplace' (Substitute Ordinance, 2004, p.14).

Further, on January 22<sup>nd</sup>, 2007, a new net worth standard was implemented increasing the threshold value from \$750k (Blanchflower, 2005). Individuals are now eligible for the program if they are economically disadvantaged, where this is defined as meaning an individual whose net worth is less than \$2 million, adjusted annually for inflation. Personal net worth does not include the individual's ownership interest in an applicant or other city certified DBE or MBE or the individual's equity in his or her primary place of residence. It does include the present value of the individual's vested pension plan, retirement accounts or 401k's. Asians were added back into the program in 2007.

This report builds on a number of other reports I have already written relating to goal setting for the City of Chicago. These include my reports in the BAGC vs. City of Chicago case Blanchflower (2002a, b, c) as well as a report on net worth (2005a), a report on narrow tailoring (2004b) and one on the inclusion of Asians (2007b). I have also provided a report to Chicago Public Schools (Blanchflower, 2006) and contributed to

a report to the Metropolitan and Pier Exposition Authority (Bates, 2006). I provided an interim report on the program (Blanchflower, 2007a).

In what follows I provide evidence relevant to determining whether the program should continue past the sunset date at the end of 2009. **I argue that it should.** I cover 12 main areas.

- 1) Background economic conditions.
- 2) Changing demographics in Chicago.
- 3) What is special about the construction industry?
- 4) Entrepreneurship, Self-employment and Small firms.
- 5) The Construction Industry and Affirmative Action Programs.
- 6) Empirical evidence on the incidence of self-employment.
- 7) Self-employment earnings and wages.
- 8) Liquidity constraints.
- 9) Trends and prospects for small businesses.
- 10) Availability of firms.
- 11) Goal percentages and utilization of minorities
- 12) Conclusions and recommendations.

### **1) Background Economic Conditions**

During 2008 and 2009 the US economy has been hit by a once in a hundred years financial crisis. It is more global in nature than was the case of the Great Crash of 1929 and at least as significant a crisis as occurred at the outbreak of the First World War.<sup>1</sup> Against this background it seems that the US, along with a number of other countries including the UK, Germany, Denmark and Japan, is now in recession.<sup>2</sup> For example, both the EU and the Euro Area declined by 1.5% in 2008Q4. In the fourth quarter of 2008 the US had a decline in GDP growth on the preceding quarter of 1.0% which was the largest quarterly decline since 1982. In the final quarter of 2008 Germany declined by 2.1% and the UK of 1.5. The United States, Japan; the UK; Germany; Estonia; Spain; Italy; Hungary the Netherlands; Portugal all had two successive quarters of GDP growth, which conforms to the technical definition of a recession. The NBER dating group called the start of the US recession as being in December 2007, based on the start of the decline in employment.<sup>3</sup>

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<sup>1</sup> David G. Blanchflower (2008), 'Where next for the UK economy?', open lecture on Wednesday 29th October 2008 at Keynes College, University of Kent, UK, published in the Scottish Journal of Political Economy, February 2009, downloadable at <http://www.dartmouth.edu/~blnchflr/papers/sjpespeech2.pdf>

<sup>2</sup> See for example the bank of England's February 2009 Inflation Report and the most recent report on the decline in GDP growth from the European Union <http://www.bankofengland.co.uk/publications/inflationreport/2009.htm> and [http://epp.eurostat.ec.europa.eu/pls/portal/docs/PAGE/PGP\\_PRD\\_CAT\\_PREREL/PGE\\_CAT\\_PREREL\\_YEAR\\_2009/PGE\\_CAT\\_PREREL\\_YEAR\\_2009\\_MONTH\\_02/2-13022009-EN-AP.PDF](http://epp.eurostat.ec.europa.eu/pls/portal/docs/PAGE/PGP_PRD_CAT_PREREL/PGE_CAT_PREREL_YEAR_2009/PGE_CAT_PREREL_YEAR_2009_MONTH_02/2-13022009-EN-AP.PDF)

<sup>3</sup> <http://www.nber.org/cycles/dec2008.html>

US domestic demand growth fell sharply in Q3 of 2008, and Q4 and the prospects for 2009 are extremely gloomy. Underlying the downturn in domestic demand has been a sharp decline in consumer spending. That reflected tight credit conditions, lower household wealth and a deteriorating labour market. According to the Bureau of Labor Statistics in its most recent release on February 9<sup>th</sup> 2009 on the *Employment Situation* the unemployment rate rose to 7.6% in January 2009, up from 4.9% in January 2008. For the first time on record, in December 2008 the unemployment rate rose in all fifty states, and the District of Columbia. Total seasonally adjusted non-farm employment, based on establishment data, fell from 138,080,000 in January 2008 to 134,580,000 in January 2009 - a loss of 3.5 million jobs in twelve months.<sup>4</sup> The non-seasonally adjusted unemployment rate in Chicago-Naperville-Joliet, IL was 9.3% in March 2009.<sup>5</sup>

Residential investment also continued to weigh on domestic demand growth in Q3, and high levels of unsold homes pointed to further falls in Q4. Positive contributions from net trade — reflecting both strong export growth and weakening imports — have boosted overall GDP growth over the past year but that support is likely to ease as global demand growth slows. The U.S. Census Bureau and the U.S. Bureau of Economic Analysis, through the Department of Commerce, announced on February 11<sup>th</sup> 2009 that total December exports of \$133.8 billion and imports of \$173.7 billion resulted in a goods and services deficit of \$39.9 billion, down from \$41.6 billion in November. December exports were \$8.5 billion less than November exports of \$142.3 billion. December imports were \$10.2 billion less than November imports of \$183.9 billion. In December 2008, the goods and services deficit decreased \$17.6 billion from December 2007. Exports were down \$12.3 billion, or 8.4 percent, and imports were down \$30.0 billion, or 14.7 percent from December 2007.

In the minutes of the meeting of January 27<sup>th</sup> and 28<sup>th</sup>, 2009, the Federal Open Market Committee of the Reserve Board of Governors, when it lowered its target for the federal funds rate 50 basis points to 1 percent, noted that the US economy had slowed significantly.

"Information received since the Committee met in December suggests that the economy has weakened further. Industrial production, housing starts, and employment have continued to decline steeply, as consumers and businesses have cut back spending. Furthermore, global demand appears to be slowing significantly.<sup>6</sup>

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<sup>4</sup> <http://www.bls.gov/news.release/empsit.t14.htm>

<sup>5</sup> [http://www.bls.gov/xg\\_shells/ro5xg02.htm#msa](http://www.bls.gov/xg_shells/ro5xg02.htm#msa)

<sup>6</sup> <http://www.federalreserve.gov/newsevents/press/monetary/20090128a.htm>

The price of oil has now fallen from its heights of around \$150 a barrel to below \$50. Other commodity prices are falling as demand in the US and world economies more generally slows. Slowing demand has now resulted in a sharp drop in the inflation rate.<sup>7</sup> In a data release on April 15<sup>th</sup> 2009 the Labor Department announced that the Consumer Price Index for All Urban Consumers (CPI-U) increased 0.2 percent in March, before seasonal adjustment. The index has decreased 0.4 percent over the last year, the first 12 month decline since August 1955. The Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) increased 0.2 percent in March, prior to seasonal adjustment. The index value of 207.218 was 0.9 percent lower than in March 2008.

As the FOMC noted, the US economy more generally is slowing, consumer confidence is down and retail sales are slowing fast.<sup>8</sup> Details of a variety of illustrative data series are provided in Data Appendix Table 1 including the Conference Board Index and the Reuters / University of Michigan Index of consumer confidence. Data are also presented on real consumption and real personal disposable income which all started to slow sharply from around the fall of 2008. Labour market and housing market data are also provided. All of these series have slowed through 2008 and are expected to loosen further through 2009 and even into 2010. The duration and depth of any recession will depend on the effectiveness of the monetary and fiscal stimulus packages that have been implemented as well as on the effectiveness of such packages in other countries. Slowing world demand could also slow the US economy further.

#### *House Prices*

House prices in the US reached their peak in January 2006, with an annual growth rate of 10.4%. Between that date and the Spring/Summer of 2007 the rate of growth of house prices slowed. The exact date when house price growth became negative varies depending upon which index is examined. **Table 1** reports data from the two main indices. Column 1 year-on-year median house prices of existing one family homes including condominiums from the National Association of Realtors while column 2 reports the Case-Shiller twenty city house price index. Both series suggest rapid slowing in house prices since September 2007, which shows no sign of abating. House prices are falling by around 15% oya on the former index and 18% on the latter.

**Table 2** provides data from the Case-Shiller Home Price Indices, showing declines in the prices of existing single family homes across the United States, with all of the 20 MSAs now reporting posting record low annual declines, sixteen of which are in double-digits. The 10-City Composite posted a new record low annual decline of 19.4%, and the 20-City Composite recorded an annual decline of 19.0%. The monthly data show that every one of the MSAs has now declined every month since September 2007. Phoenix, Las

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<sup>7</sup> <http://www.bls.gov/news.release/cpi.nr0.htm>

<sup>8</sup> <http://www.bea.gov/newsreleases/national/gdp/gdpnewsrelease.htm>  
<http://www.conference-board.org/economics/ConsumerConfidence.cfm>  
<http://www.census.gov/marts/www/retail.html>



Vegas and San Francisco share the dubious distinction of being the weakest past 12 months returning -35.0%, -32.5% and -32.4%, respectively. House prices in the Chicago MSA dropped by 16.4% year on year.

It is uncertain how much further house prices will drop. Fannie Mae's CEO Daniel Mudd told shareholders on May 20<sup>th</sup> 2008 that the housing market is "about halfway through" its crisis and home prices could fall as much as 25% before the worst is over". Also on May 20<sup>th</sup> Vice-Chairman of the Federal Reserve Donald Kohn argued that there are considerable uncertainties ahead.

"As with any forecast, mine is subject to a number of uncertainties. One is the extent of the housing correction ahead of us. If the retrenchment in house prices becomes deeper than anticipated, its effect on lenders and financial markets could further damp overall economic activity. We are in uncharted waters when the financial system becomes so disrupted, though we should consider ourselves fortunate that we have very few similar historical episodes on which to base our judgments. In such circumstances, uncertainty about how credit conditions will evolve and how businesses and households will react to changing terms and conditions means that we can have even less confidence than usual in our economic forecasts."<sup>9</sup>

The Federal Reserve's latest Senior Loan Officer Survey of January 2009 showed further tightening of residential real estate lending.<sup>10</sup> Smaller, though still substantial, fractions of domestic respondents reported having tightened lending standards on prime and nontraditional residential mortgages in the January survey. About 45 percent of domestic respondents indicated that they had tightened their lending standards on prime mortgages over the past three months, and almost 50 percent of the 25 banks that originated nontraditional residential mortgage loans over the survey period reported having tightened their lending standards on such loans. About 10 percent of domestic respondents saw weaker demand, on net, for prime residential mortgage loans over the past three months, a significantly lower fraction than the roughly 50 percent that so reported in the October survey. About 65 percent of respondents--a slightly lower percentage than in the October survey--reportedly experienced weaker demand for nontraditional mortgage loans over the same period. Only four banks reported making sub-prime mortgage loans over the past three months. On net, about 60 percent of domestic respondents, down from 75 percent in the October survey, noted that they had tightened their lending standards for approving applications for revolving home equity lines of credit (HELOCs) over the past three months.

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<sup>9</sup> Speech by Vice-Chairman Donald Kohn on 'The Economic Outlook' at the National Conference on Public Employee Retirement Systems Annual Conference, New Orleans, Louisiana May 20<sup>th</sup>, 2008  
Downloadable at <http://www.federalreserve.gov/newsevents/speech/kohn20080520a.htm>

<sup>10</sup> <http://www.federalreserve.gov/boarddocs/SnLoanSurvey/200902/default.htm>

*A weak housing market impacts negatively on the availability of work for all construction firms.* The importance of public sector contracts becomes even more important in recessions, especially for firms owned by women and minorities.

#### *Commercial property*

To this point the falls in residential property prices have been much greater than those in the commercial property sector. However, recent evidence suggests that declines are now accelerating in that sector. Industry tracker McGraw-Hill Construction reported that nonresidential construction starts had remained strong through February 2008, then plunged 23% in March.<sup>11</sup> The March statistics lowered the so-called Dodge Index to 110 (2000=100), compared to 119 in February. The December 2008 reading was 90.

Commercial property prices in the US in February saw their sharpest decline since records began nearly 15 years ago as sources of finance for deals have dried up, according to recently released data from Standard & Poor's. The value of commercial buildings fell 1.03 per cent between January and February 2008, the largest monthly decline since at least 1993, when the industry was just emerging from a deep slump. Prices were weak in the office sector, which declined 1.9 per cent over the month, and in the north-east, where values were off 2.4 per cent.

Another troubling sign is that the Architecture Billings Index, a widely respected leading indicator of commercial construction from the American Institute of Architects, has been in a free-fall for several months. As a leading economic indicator of construction activity, the ABI reflects the approximate nine to twelve month lag time between architecture billings and construction spending. The American Institute of Architects (AIA) reported the December ABI rating was 36.4, up from the 34.7 mark in November (any score above 50 indicates an increase in billings). The inquiries for new projects score was 37.7.

The Federal Reserve's latest Senior Loan Officer Survey of January 2009 showed tightening of credit in commercial real estate.<sup>12</sup> On balance, about 80 percent of domestic banks reported that they had tightened their lending standards on commercial real estate (CRE) loans over the past three months, slightly less than the roughly 85 percent that reported doing so in the October survey. In response to special questions on CRE lending, significant net fractions of banks reported having tightened many lending policies on CRE loans. Over 2008 as a whole, about 95 percent of domestic banks increased their loan-rate spreads, and about 80 percent tightened their loan-to-value ratios. About 75 percent of foreign respondents, on net, reported wider loan-rate spreads, and about 65 percent, on net, had reduced their loan-to-value ratios. About 30 percent of the domestic respondents indicated that the shutdown of the CMBS securitization market had led to an increase in CRE lending at their bank over the second half of 2008, whereas

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<sup>11</sup> <http://www.construction.com/ResourceCenter/forecast/2008/April.asp>

<sup>12</sup> <http://www.federalreserve.gov/boarddocs/SnLoanSurvey/200902/default.htm>

about 15 percent indicated that the shutdown of the CMBS securitization market had reduced the volume of their CRE lending.

The commercial real estate market, and trends in commercial property prices tend to lag behind housing trends in the US. As Gene Sperling, formerly President Bill Clinton's top economic adviser has noted, the residents of new developments need stores to shop in and offices to work in, so commercial projects are planned after a town starts booming and are completed in the following quarters. So when times are good for housing, commercial property makes the real-estate investment news even better.<sup>13</sup> Unfortunately, the reverse also seems to work. Second, Sperling goes on to note, there are lots of reasons to suspect that commercial real estate was subject to some of the loose lending practices that afflicted the residential market. The Office of the Comptroller of the Currency's Survey of Credit Underwriting Practices found that whereas in 2003 just 2 percent of banks were easing their underwriting standards on commercial construction loans, by 2006 almost a third of them were relaxing. Fitch Ratings offers evidence of such eased standards, reporting that the share of securitized commercial loans that were fully amortizing -- or structured to be paid off in full by the end of the loan period -- fell from more than 92 percent at the start of 2002 to just 13 percent by mid-2007. The concern here is that activity and prices in the commercial property sector will decline further.

In the minutes of a recent policy meeting the FOMC noted the slowing in the commercial property market

"Indicators suggested that the demand for commercial properties had fallen off substantially from record levels last year, and commercial property prices appeared to be decelerating. Reduced credit availability and less-favorable lending terms had apparently weighed on activity in this sector".<sup>14</sup>

*A weak commercial property market also impacts negatively on the availability of work for all construction firms.* The importance of public sector contracts becomes even more important in recessions, especially for firms owned by women and minorities.

*Value of construction put in place*

**Table 3** provides information on changes in the seasonally adjusted value of construction output put in place between December 2007 and December 2008. The total value of construction declined by 3.6% or by approximately \$40 billion over this twelve month period. The level of residential construction, however, fell over this period by 22.9% or

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<sup>13</sup> 'Double-Bubble Trouble in Commercial Real Estate': Gene Sperling, May 9<sup>th</sup> 2008  
[http://www.bloomberg.com/apps/news?pid=20601039&refer=columnist\\_sperling&sid=a.X91SkgOd8g](http://www.bloomberg.com/apps/news?pid=20601039&refer=columnist_sperling&sid=a.X91SkgOd8g)

<sup>14</sup> Minutes of the Federal Open Market Committee, April 29-30, 2008, page 4.  
<http://www.federalreserve.gov/newsevents/press/monetary/20080521a.htm>

by nearly \$100 billion. The Table also illustrates the increasing importance of public sector construction. Private sector construction fell by 7.6% whilst public sector construction grew by 7.0%. Public construction is now an even larger proportion of total construction than it was even in the near past, and rising inexorably as the crisis in private residential construction develops. In December 2008 public sector construction, state, local and federal accounted for 30.0% of the total, up from 23.8% in March 2007. Public construction is particularly important for firms owned by minorities and women.

**Table 4** provides annual comparisons between 2007 and 2008. Total construction in 2008 was 5.1% less than in 2007. Residential construction was down 26.8% while non-residential increased by 11.8%.

The value of construction put in place has declined sharply. The construction industry is in deep recession.

#### *Housing starts*

Privately-owned housing units authorized by building permits in December 2008 were at a seasonally adjusted annual rate of 550,000 (**Table 5**, column 1). This is less than a quarter of the number in January 2006. Permits to build were also around a quarter of their January 2006 level (**Table 5**, column 2).

The National Association of Home Builders/Wells Fargo monthly index, in January 2009 fell to its lowest reading on record. NAHB produces the Housing Market Index (HMI), a weighted, seasonally adjusted statistic derived from ratings for present single-family sales, single-family sales in the next six months and buyers traffic. The first two components are measured on a scale of "good" "fair," and "poor," and the last one is measured on a scale of "high," "average," and "low." A rating of 50 indicates that the number of positive or good responses received from the builders is about the same as the number of negative or poor responses. Ratings higher than 50, indicate more positive or good responses.

| 2008                                      |     |     |     |     |     |     |     |     |     |     | 2009 |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Feb                                       | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan  |
| 20  | 20  | 20  | 19  | 18  | 16  | 16  | 17  | 14  | 9   | 9   | 8    |
| <b>Housing Market Index Components</b>    |     |     |     |     |     |     |     |     |     |     |      |
| <b>Single-Family Sales: Present</b>       |     |     |     |     |     |     |     |     |     |     |      |
| 20  | 20  | 18  | 17  | 17  | 15  | 16  | 17  | 14  | 9   | 8   | 6    |
| <b>Single-Family Sales: Next 6 Months</b> |     |     |     |     |     |     |     |     |     |     |      |
| 27  | 26  | 30  | 28  | 27  | 23  | 24  | 28  | 19  | 18  | 16  | 17   |
| <b>Traffic of Prospective Buyers</b>      |     |     |     |     |     |     |     |     |     |     |      |
| 19  | 19  | 19  | 18  | 16  | 12  | 13  | 14  | 11  | 7   | 7   | 8    |

All of the HMI's component indexes remained at or near historic lows in January. The index gauging current sales conditions recorded the greatest change, with a two-point decline to 6. Meanwhile, the indexes gauging sales expectations for the next six months and traffic of prospective buyers each rose a single point, to 17 and 8, respectively. Regionally, the HMI fell one point to 10 in the Northeast, held even at 6 in the Midwest, rose one point to 11 in the South and fell three points to new record low of 4 in the West in January.

McGraw-Hill Construction, part of The McGraw-Hill Companies (NYSE: MHP), has released their *2009 Chicago Construction Outlook*. The study forecasts a 25% decline in 2009 total construction starts to \$13.7 billion for the Chicago metropolitan area, including Chicago-Naperville-Joliet, IL; Kenosha County, WI; and Gary, IN.

Highlights of the report conclude:

- \* Residential construction, which saw large losses (51%) in both the single and multifamily sectors in 2008, will see a modest 3% gain in 2009 to \$4.5 billion.

- \* Non-building construction starts are expected to dip mildly (1%) in 2009.

- \* Nonresidential building starts will grow 38% this year, due to four sectors: manufacturing, education, healthcare, and public buildings, but in 2009, this will be reversed as nonresidential starts fall 45%.

#### *Foreclosures*

Foreclosure filings were reported on shows a total of 3,157,806 foreclosure filings — default notices, auction sale notices and bank repossessions — were reported on 2,330,483 U.S. properties during 2008, an 81 percent increase in total properties from 2007 and a 225 percent increase in total properties from 2006, according to the U.S. Foreclosure Market Report from RealtyTrac, an online marketplace that tracks foreclosed properties. The report also shows that 1.84 percent of all U.S. housing units (one in 54) received at least one foreclosure filing during the year, up from 1.03 percent in 2007.

There were foreclosure filings on 803,489 U.S. properties in Q1 of 2009, up 9 percent from the previous quarter and up nearly 24 percent from Q12008 ([Table 6a](#)). Foreclosure filings were reported on 341,180 properties in March, a 17 percent increase from the previous month and a 46 percent increase from March 2008. The March and Q1 2009 totals were the highest monthly and quarterly totals since RealtyTrac began issuing its report in January 2005 despite a decrease in bank repossessions, which were down 13 percent from the fourth quarter of 2008 and 3 percent from February totals.

California, Florida, Arizona, Nevada and Illinois accounted for nearly 60 percent of the nation's foreclosure activity in the first quarter, with 479,516 properties receiving foreclosure filings in the five states combined. With 230,915 properties receiving foreclosure filings during the quarter, California accounted for nearly 29 percent of the nation's total. The state's foreclosure activity increased 35 percent from the previous

quarter and 36 percent from Q1 2008, and the first-quarter total was state's highest quarterly total since RealtyTrac began issuing its report in the first quarter of 2005.

Despite a 12 percent decrease from the previous quarter, Florida's first quarter total was still second highest in the nation. Foreclosure filings were reported on 119,220 Florida properties, a 36 percent increase from the first quarter of 2008. The state posted the nation's fourth highest state foreclosure rate during the quarter, with one in every 73 housing units receiving a foreclosure filing. Foreclosure filings were reported on 49,119 Arizona properties in the first quarter of 2009, the third highest total among the states, and 41,296 Nevada properties received a foreclosure filing in the first quarter of 2009, the fourth highest total among the states.

Illinois posted the nation's fifth highest total, with 38,966 properties receiving a foreclosure filing during the first quarter — a 32 percent increase from the previous quarter and a 68 percent increase from the first quarter of 2008. With one in every 135 housing units receiving a foreclosure filing, the state's foreclosure rate also ranked fifth highest among the states.

**Table 6b** reports foreclosures by metropolitan area. Las Vegas posted the highest metro rate, with 4.48 percent of its housing units receiving a foreclosure filing during the quarter (one in every 22) — more than seven times the national average. Merced, Calif., documented the second highest metro foreclosure rate, with 4.21 percent of its housing units receiving a foreclosure filing (one in every 24), and Cape Coral-Fort Myers, Fla., recorded the third highest metro foreclosure rate, with 3.85 percent of its housing units receiving a foreclosure filing (one in every 26). Other metro areas in the top 10 were the California cities of Stockton, Riverside-San Bernardino, Modesto, Bakersfield, and Vallejo-Fairfield, along with Phoenix and Port St. Lucie, Fla. Thirteen of the top 26 metro foreclosure rates were in California, nine were in Florida, and Nevada and Arizona each added two to the Top 26 list. Chicago-Naperville-Joliet, IL-IN-WI, ranked 40<sup>th</sup> with 35,291 foreclosure filings in Q1 2009. That is one in every 106 housing unit and a 69% increase from Q1 2008.

There is also evidence of an increase in foreclosures from other sources in Chicago.<sup>15</sup> The National Training and Information Center (NTIC), shows that the greatest percentage increase in foreclosures occurred in near West and near North Side neighborhoods, where the majority of the residents are minorities, from 2006-2007. Logan Square, for instance, had a 108-percent increase in foreclosures from 2006 to 2007, from 101 to 210 foreclosures. West Town saw a huge increase, up 87 percent in 2007 to 234, according to the study. Humboldt Park had 57 percent more foreclosures, or 426, ranking 39th among the city's community areas. The Loop and nearby lakefront communities also suffered from a dramatic rise in foreclosures, showing that even affluent areas of the city are not immune from the effects of the housing meltdown. Lincoln Park's 79 foreclosures for

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<sup>15</sup> The evidence here is based on the following story - 'Foreclosure rates swell on West Side' by Melissa Schmitt, *Austin Weekly News*, May 20<sup>th</sup>, 2008

2007 were up 65 percent over those in 2006. The Loop experienced a 51-percent rise, climbing to 83 foreclosures, while the Near North saw a 33-percent increase in foreclosures, up to 249. The group's study found that of Chicago's 14,250 new foreclosure cases in 2007, more than 87 percent were on loans not covered by the Illinois High Risk Home Loan Act. That bill, passed in 2003, aimed to regulate high interest rate loans. Many of those sub-prime loans had interest rates just under the cut-off for loans that had to conform to the act. They nevertheless remained at high rates in comparison to conventional mortgages, with interest rates between 3- and 6-percent higher than those of the U.S. Treasury rate. In addition, many of the city's foreclosures last year were on so-called "young loans" - those less than 24 months old. Of the young loans that went into foreclosure, 75 percent were on adjustable rate mortgages, with rates that can adjust up or down every six months after an initial introductory fixed rate.

#### *Housing Vacancy rates*

National vacancy rates in the fourth quarter 2008 were 10.1 percent for rental housing and 2.9 percent for homeowner housing, the Department of Commerce's Census Bureau reported on February 3<sup>d</sup>, 2009.<sup>16</sup> The Census Bureau said the rental vacancy rate was higher than the fourth quarter rate last year (9.6 percent). For homeowner vacancies, the current rate was 2.8 percent. The homeownership rate at 67.5 percent for the current quarter was lower than the rate last quarter (67.9 percent). This compared to 68.9 in the fourth quarter of 2007 when house prices peaked.

Approximately 85 percent of the housing units in the United States in the fourth quarter 2008 were occupied and a remarkable 15 percent were vacant. The owner-occupied housing units were 58 percent of total housing units and renter-occupied units made up 28 percent of total housing units in fourth quarter 2008. Vacant housing units comprised 15 percent of total housing units, including 11 percent for year-round use and 4 percent for seasonal use. Approximately 3 percent of the total units were for rent, 2 percent were for sale only, and 6 percent were vacant for a variety of other reasons.

Rental vacancy rates in Chicago-Naperville-Joliet, IL in the fourth quarter of 2008 were 11.1% compared with 8.2% in the third quarter. Homeowner vacancy rates were 3.7% up from 3.3% in Q32008 and 2.7% in Q12008. Home ownership rates declined from 69.1% in Q12008; 68.4% in Q32008 to 67.9% in Q42008.<sup>17</sup> According to the 2007 ACS Total housing units 13.6% of houses in Chicago City were vacant compared with 11.6% nationally. There is an over-supply of houses currently in Chicago, which doesn't augur well for the construction industry.

On all of the measures we have examined here, the construction industry is in deep decline. Housing starts are down; house prices and commercial property prices are down. Foreclosures are up. This downturn is likely to hit the smallest and weakest the most.

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<sup>16</sup> <http://www.census.gov/hhes/www/housing/hvs/qtr408/files/q408press.pdf>

<sup>17</sup> <http://www.census.gov/hhes/www/housing/hvs/rates/index.html>

### *Labour market changes*

The labor market has loosened sharply recently on a number of dimensions but especially in terms of decreases in employment and increases in unemployment. Non-farm payroll employment fell by 539,000 in April 2009, and the unemployment rate stands at 8.9%. The U.S. Department of Labor reported on February 12<sup>th</sup> 2009 that initial filings for state jobless benefits for the week ending Feb. 7<sup>th</sup> 2009, the advance figure for seasonally adjusted initial claims was 623,000, a decrease of 8,000 from the previous week's revised figure of 631,000. The 4-week moving average was 607,500, an increase of 24,000 from the previous week's revised average of 583,500. The advance seasonally adjusted insured unemployment rate was 3.6 percent for the week ending Jan. 31, unchanged from the prior week's unrevised rate of 3.6 percent. The advance number for seasonally adjusted insured unemployment during the week ending Jan. 31 was 4,810,000, an increase of 11,000 from the preceding week's revised level of 4,799,000. The 4-week moving average was 4,745,250, an increase of 73,750 from the preceding week's revised average of 4,671,500. These data suggest that the labor market continues to loosen.

**Table 7** shows changes in the number of employees on non-farm payrolls since 1957. Separate estimates are reported for the USA as a whole, for the private sector and construction. Construction as a proportion of private sector employment declined from 6.65% in 1957 to a low of 5.12% in 1992, rising to 6.74% in 2006, but has declined sharply since then. **Chart 1** plots annual employment growth of both the private sector and construction since 1958. It shows that construction employment growth is especially cyclically volatile and more so than private sector employment growth.

**Table 8** provides more recent detail on the industrial breakdown of the change in the numbers of *non-farm employees* experienced in the US since September 2008. It is apparent that the construction sector has been especially important in the decline, falling extremely sharply by 111,000 in the four months between September 2008 and January 2009. Particularly notable is the decline of approximately 67,000 in the numbers of specialty trades contractors. There were declines in employment in residential and non-residential construction as well as in heavy and civil engineering. This is to be expected given the evidence that employment in the US construction industry is especially volatile as shown in **Chart 1**.

**Table 9** provides details of the distribution of employment in construction according to its various components, based on the 2002 Economic Census. The table splits up the overall NICS code of 23 for construction into 31 separate groupings with data for the number of establishments, the total number of employees, total payroll and the value of construction. The most important sectors in terms of value was commercial building construction, while in terms of total employment, plumbing and electrical contractors were the most important. Overall in 2002 more than \$1.2 trillion was spent on construction, private and public, in the United States.

**Table 10** shows industry level changes in the number of *employees* in the Chicago-Naperville-Joliet, IL Metropolitan Statistical Area - henceforth *Chicago*. Construction



employment reached a peak in 2002. It has taken a dramatic decline in 2008, losing nearly 20,000 jobs, mostly in specialty trades. Construction employment now constitutes 4.0% of total employment, back to the levels of the late 1990s before the housing boom.

**Table 11** provides data on changes in civilian unemployment rates by race and gender. It is apparent from the table and the latest release on the employment situation from the BLS that

- a) African American unemployment rates are rising especially rapidly.
- b) Hispanic and Asian rates are rising sharply.
- c) Youth unemployment rates are now over 20%.
- d) Black youth unemployment rates (ages 16-19) increased from 33.7% in December 2008 to 36.5% in January 2009.
- e) Unemployment rates for those with less than a high school diploma rose from 10.9% in December 2008 to 12.0% in January 2009. Rates for high school graduates rose from 7.7% to 8.0%; those with some college, associate degree unemployment rates rose from 5.6% to 6.2% and for those with college degrees from 3.7% to 3.8% over the same period.

**Table 12** provides further evidence on employment and unemployment changes in 2008 for Chicago-Naperville-Joliet, IL. Unemployment is picking up quite sharply. Construction employment has fallen by over 20,000 since July 2008. The CPI is now falling sharply.

**Table 13** presents the latest data available for May 2007 on the distribution of *employees* by occupation in Chicago and their wages. The decline in the numbers of special trade contractors is likely to hit hard on construction employment in Chicago given the importance of these trades in the local economy. Overall, in May 2007 there were 26,780 carpenters (17.1% of the total); 17,770 electricians (11.3%) and 12,940 plumbers (8.2%). These occupations had mean annual earnings of \$57,610 compare with an average of \$45,710 in the MSA as a whole.

A further concern is that these data exclude the *self-employed*, whose employment, almost by definition, is cyclically volatile. The latest numbers available are presented in **Table 14** which suggest that the number of non-agricultural unincorporated self-employed in the US has *fallen* by around 420,000 between January 2008 and January 2009. It has fallen by 4.5% over the last twelve months compared with 2.7% for wage and salary workers. As a consequence, the overall self-employment rate is 6.8% compared with 8.7% in 1985 and 7.5% in 2004.

**Table 15** shows changes in the numbers of unincorporated self-employed from 2000-2007 by industry. Overall self-employment grew by 3.6% and 9.4% in construction. Self-employment is especially important in construction. According to the author's calculations with the micro-data from the Basic Monthly files of the 2008 Current Population Survey, self-employment rates (unincorporated + incorporated as a percent of total employment) were 10.6% overall, made up of 6.8% unincorporated and 3.8% incorporated compared with 24.1% in construction (16.0% and 8.1% respectively).

Overall construction accounts for 18.2% of all the self-employed from the CPS 2008. Declining self-employment, alongside the documented decline in the number of employees in construction is likely to be a major issue going forward over the next eighteen months or so in Chicago and elsewhere.

The construction labour market has loosened sharply over the last year. Unemployment in construction in March 2009 was 800,000 higher than a year earlier; the unemployment rate was 21.1% up from 12% a year earlier. Seasonally adjusted employment in construction is down by nearly a million on a year ago.<sup>18</sup> The black unemployment rate is now 13.3% and 11.4% for Hispanics compared with 7.9% for whites.

The recession is hitting construction workers and minorities especially hard. A group that is likely to be among the hardest hit are the overlapping set - minorities in construction.

## **2) Changing Demographics in Chicago**

We now move on to briefly chart the changes in the racial and ethnic composition of the city of Chicago and its surrounding counties. This is relevant as a backdrop to any analysis of the need for an MWBE program. The City of Chicago and its surrounding counties have a high proportion of minorities: the mix of this population by racial group and location has changed markedly over time as a process of suburbanization has occurred. **Table 16** reports on recent changes in the population and the racial composition of the City of Chicago as well as Cook County of which the City of Chicago is a part as well as the surrounding counties of DuPage; Lake; Will; Kane and McHenry as well as the state of Illinois as a whole. Data are from the US Census of Population and Housing for 2000 and from the American Community Survey of 2007. The Census is a count of everyone while the ACS is a sample of 2,994,662 people. Note that here race is reported for those individuals who report one race and then, separately, if they report two or more races. The sum of the four single race categories of white; African American, Asian and other (which includes American Indian and Alaskan Native; Native Hawaiian and Other Pacific Islander and 'some other race' as well as the final category 'two or more races') sum to approximately 100 percent. Here Hispanics are not identified: I drop that condition below.

1) The population of both the City of Chicago and Cook County are markedly lower in 2007 than they were in the 2000 Census (-91,634 and -158,020 respectively). It is unclear how reliable the 2007 estimates are from the Community Survey as they are based on samples. The increase of more than 170,000 for Will County between 2000 and 2007 seems unlikely.

2) The racial distribution of the City of Chicago is different from that of the surrounding areas. The City of Chicago has a considerably lower proportion of whites than is true in the rest of Cook County; the state of Illinois and the USA as a whole.

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<sup>18</sup> <http://www.bls.gov/news.release/empsit.nr0.htm>

3) The proportion of the population of the City of Chicago that is African American is especially high.

4) The surrounding counties of DuPage; Lake; Will; Kane and McHenry counties have higher proportions of their residents who are white than is found in the state of Illinois or the United States as a whole. Will County has a significant and growing Asian population.

5) There is evidence that the proportion of whites in the City of Chicago has decreased between 2000 and 2007.

**Table 17** presents estimates of population by race and ethnicity derived from the most recent data available from the US Census Bureau from its *American Factfinder* webpage (<http://factfinder.census.gov/home/saff/main.html?lang=en>). To ensure adequate sample sizes and to eliminate some sampling variability the Census Bureau for the first time has presented evidence by merging together data from three sample years of the American Community Survey (ACS) from 2005-2007 to identify race and ethnicity somewhat differently. Here the population is characterized as being Hispanic first and then if non-Hispanic is then separated into five distinct non-Hispanic racial categories – white; African American; American Indian; Asian/Hawaiian Pacific Islander and other. The six items in each row now sum to 100 percent: individuals are Hispanic or non-Hispanic and if so then their race is reported. Data are reported for the six counties included in the relevant area for the MWBE program - Cook, DuPage; Kane; Lake; McHenry and Will. I aggregate these six together and obtain pooled estimates for the six counties and then separately for the City of Chicago. **Table 18** presents the percentage distributions. Hispanics account for 28% of the population of the City of Chicago in 2007, and 20% in the Six Counties. Hispanics in Chicago are the second largest grouping after whites (31%) and African Americans (35%).

**Tables 19** and **20** report the numbers, and the percentage changes respectively, in the Hispanic and non-Hispanic populations in Chicago city and its suburbs from 1980-2000. It is apparent that the numbers of non-Hispanic whites in Chicago city fell by approximately 392,000 between 1980 and 2000 while the number of African Americans declined by around 134,000 while the numbers of Non-Hispanic other races and Hispanics showed increases (86,000 and 332,000 respectively). The percentage of the City of Chicago's population that was Hispanic increased from 14.0% in 1980 to 26.0% in 2000 while the percentage white non-Hispanic fell from 43.2% to 31.3% and the percent African American fell from 39.5% to 36.4%.

According to the 2007 ACS 21.7% of city residents were foreign born. Only 78.3% of Chicago residents in 2000 were native born compared with 88.9% for the USA. A higher proportion of the foreign born in Chicago came from Europe than is true nationally (23% and 16% respectively). Over 56% of the foreign born in Chicago come from Latin America while 23% are from Europe. I examined the 5% PUMS data for Chicago and found that of foreign born whites, 42% spoke Polish. According to the 2000 Census a higher proportion of the residents of the City of Chicago reported Polish ancestry (7.3%)

than from any other single country. According to the 2007 ACS, those of Polish descent accounted for 6.6% of the population, a smaller proportion than those of Irish (7.4%) or German (7.3%) ancestry.

To summarize, there is a high proportion of minorities living in and around the City of Chicago. The numbers of non-Hispanic whites living there has declined over time as they have moved to the suburbs. There has been a large influx of Hispanics. The percent of the population in poverty or foreign born is rising.

### **3. What is special about the construction industry?**

Construction is an important sector. In 2003, over 8 million workers, or approximately six per cent of workers in the United States, held a construction job.<sup>19</sup> This is made up of 6.7 million wage and salary jobs and 1.6 million self-employed and unpaid family non-government jobs. The construction industry accounts for a disproportionate share of union members and of the self-employed. The self-employment rate is over 30% for painters, carpenters, roofers and carpet, floor and tile installers.<sup>20</sup> In 2008 16.2% of construction workers were union members compared with 8.4% for the private sector as a whole. The construction industry, in 2003, accounted for 13.5% of all private sector union members and 16.7% of all of the unincorporated self-employed and approximately 14.9% of the incorporated self-employed.<sup>21</sup> Employment of production workers in construction has increased over the last ten years, beginning at 4,113,000 in 1995 and rising to 5,332,000 in 2001. In 2004 employment of production workers averaged 5,300,000.

The construction industry accounts for about 9.7% of all private sector *establishments*. More than four out of five establishments in the industry employ fewer than 10 employees. There were about 698,000 construction establishments in the United States in 2002 using the 2002 NAICS; 216,000 were building construction contractors; 37,000 were heavy and civil engineering construction or highway contractors and 447,000 were specialty trade contractors. Building construction accounted for 24.9% of wage and salary employment in 2002; heavy and civil for 12.1% and specialty trades for 63.0%.<sup>22</sup>

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<sup>19</sup> The main construction occupations in 2003 were, with number in thousands in parentheses, First-line supervisors (897); Brick masons (218); Carpenters (1,595); Carpet floor finishers (271); Cement masons (120); Construction laborers (1,151); Operating engineers (376); Drywall installers (205); Electricians (774); Painters (660); Pipe layers and plumbers (595); Roofers (233); Sheet metal workers (147); Helpers (114) and Inspectors (95).

Source: Table 597 Statistical Abstract of the United States 2004-5 downloadable at [www.census.gov/prod/2004pubs/04statab/labor.pdf](http://www.census.gov/prod/2004pubs/04statab/labor.pdf)

<sup>20</sup> Source: [www.bls.gov/oco/cg/pdf/cgs003.pdf](http://www.bls.gov/oco/cg/pdf/cgs003.pdf)

<sup>21</sup> Source: Statistical Abstract of the United States: 2004-2005, U.S. Census Bureau at [www.census.gov/statab/www/](http://www.census.gov/statab/www/) Table 586 and Union Membership and Coverage Database <http://www.unionstats.com/> and own weighted estimates from the basic monthly files of the CPS for those aged 16-74.

<sup>22</sup> Source: Statistical Abstract of the United States, 2004-5, Table 919

A business in the construction industry is subject to the Fair Labor Standards Act if it has two or more employees and an annual gross sales volume of \$500,000 or more. An employer under the FLSA has to establish a work week and pay overtime at one and a half times regular rate of pay when hours exceed 40. If the employer performs work on federally funded projects a different and somewhat stricter set of rules apply.<sup>23</sup>

The construction industry is also covered by Prevailing Wage Laws (PWLS) that require that workers on government sponsored construction projects be paid at the level that is at least equal to the level “prevailing” in the area where the construction takes place. The intent of such legislation is primarily to protect the local wage rates in construction. Prevailing wage laws exist at the federal, state and local levels. Eighteen States do *not* have prevailing wage laws. These States are Alabama, Arizona, Colorado, Florida, Georgia, Idaho, Iowa, Kansas, Louisiana, Mississippi, New Hampshire, North Carolina, North Dakota, Oklahoma, South Carolina, South Dakota, Utah, and Virginia.

The federal Prevailing Wage Law, the Davis-Bacon Act passed in 1931, and modified with amendments in 1935 and 1964 requires private contractors to pay workers the prevailing wage/benefit package on all contracts of more than \$2000 for construction, alteration or repair of *federal* public buildings or public works. The prevailing wage referenced in the Act is defined by the Secretary of Labor as the package of wages and benefits paid to the majority of workers in a given occupation grouping in the geographic area of the project. State prevailing wage laws set a minimum wage for construction workers on state (and usually municipal) works projects. Their terms differ across states: some are non-binding; others set wages for virtually all contracts at the collectively bargained wage level. States tend to treat jointly funded projects differently; the scope of projects and workers covered under state law also varies.

States explicitly include or exclude types of projects: for example, in 1997 Ohio eliminated the requirement of paying prevailing wages on school construction projects. States have very different threshold values to which their laws apply<sup>24</sup>. The federal prevailing wage is likely to affect labor markets disproportionately because state and local government projects are often partially federally funded. For the period 1964-2002 23.7 percent of new construction was public split up as 20.5 percent state and local and 3.1 percent federal. In 2002 the value of state and local new construction was \$187 billion and federal was \$16 billion.<sup>25</sup>

Illinois also has had a Prevailing Wage Law (PWL) since 1941. The law requires contractors and subcontractors to pay laborers, workers and mechanics paid on public

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<sup>23</sup> See [www.dol.gov/esa/regs/compliance/whd/whdfs1.htm](http://www.dol.gov/esa/regs/compliance/whd/whdfs1.htm) and [www.dol.gov/esa/whd/flsa/index.htm](http://www.dol.gov/esa/whd/flsa/index.htm)

<sup>24</sup> See <http://www.dol.gov/esa/programs/whd/state/dollar.htm>

<sup>25</sup> Source: Current Construction Reports C30 - Value of New Construction Put In Place, U.S. Department of Commerce, <http://www.census.gov/prod/www/abs/c30.html>, January 2003, Table 2.

works construction projects no less than the general prevailing rate of wages (consisting of hourly cash wages plus fringe benefits) for work of a similar character in the county where the work is performed.<sup>26</sup> Contractors found to be paying wages below the prevailing wage rate may be fined \$20 per day for each worker paid less than the established rate. Violators must pay workers the difference between the wage paid and the prevailing wage and may be subject to 20% penalties and 2% punitive damages.<sup>27</sup> A contractor found to have violated the Act on two occasions may be barred from public works projects for two years. Illinois is one of only 9 states with no minimum threshold for contract coverage; the others are Massachusetts, Michigan, Missouri, New York, Texas, Washington and West Virginia. Maryland has the highest threshold at \$500,000. Thieblot (1999) classifies Illinois as having a relatively strong PWL.<sup>28</sup>

An important feature of the construction industry is that activity in the sector is highly cyclically volatile. As we noted above in **Chart 1**, employment rises more rapidly in booms and falls more rapidly in slumps than in almost any other industry. The existence of many subcontractors is a special feature of the construction industry. It is well known that small construction companies can also expand rapidly as demand changes by hiring workers and renting equipment. Subcontracting is one important source of this elasticity, as has been noted by several academic studies. Bourdon and Levitt (1980), for example, in their study of construction labor markets, observed that:

“One of the unique aspects of the construction industry is the prevalence of subcontracting. Construction projects are undertaken by a multitude of firms assembled for brief periods of time on a site then disbanded. General contractors can undertake projects of considerable scale without large amounts of direct labor or fixed capital; subcontractors can start with one or two employees and bid only on particularly highly specialized contracts.”

Eccles (1981) also noted the importance of subcontracting in construction. He found that subcontracting could be explained as a response to uncertainty and complexity. He also found that the larger the project the more subcontracting and the more extensive the market the more subcontracting. Dowall and Barone (1993) draw a similar conclusion regarding the use of subcontractors. Firms that work as prime contractors often work as

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<sup>26</sup> See <http://www.state.il.us/agency/idol/rates/rates.HTM>

<sup>27</sup> Source: <http://www.dllr.state.md.us/labor/prev.html>

<sup>28</sup> Thieblot (1999) classifies states in a range of 2-17. Classification is as follows. “Weaker” law states were Nebraska (2); Oklahoma (now repealed) (2); Tennessee (2), Kentucky (3), Maine (3), Maryland (4), Montana (4), Texas (6). “Average” law states were Delaware (7), Connecticut (8), Wyoming (8), New Mexico (9), Arkansas (10), Indiana (10), Pennsylvania (10), Alaska (11), Nevada (11), Oregon (11), West Virginia (11), Wisconsin (11). States with “stronger” laws were Illinois (12), Missouri (12), Rhode Island (12), Ohio (12), Michigan (14), Minnesota (14), Washington (14), Hawaii (15), California (16), New Jersey (16), New York (16) and Massachusetts (17).

subcontractors and vice versa. Firms who work in narrow specialties can take on staff and broaden their scope of work.

In a recent book Finkel has pointed out the dynamic nature of the construction industry.

“The boom-bust nature of the construction industry is well known to all the participants – investors, employers and workers. The feast or famine mentality that has historically shaped much of the thinking and planning that has largely been determined by the activity in those sectors that demand construction services. As a precursor to an overall economic upswing, rapid construction expansion is often the norm as industries “tool up” for a projected rise in business activity. Its downside is the seemingly instantaneous closing of the investment spigot as overextended construction firms are soon caught with unjustifiable payrolls, inventories and overheads” (1997 p.64).

Academic studies have also found that *entry* into the construction industry is not difficult. Bourdon and Levitt attribute this to subcontracting opportunities. Eccles observes that entry is easy based on the large number of small firms and that capital requirements for fixed assets are small. Gould (1980), who followed the careers of six construction contractors, also demonstrates ease of entry. He also notes that there is movement between small and large firms not only via subcontracting, but also by experienced staff at larger firms leaving to form smaller new firms. Dowall and Barone (1993), based on a survey of construction firms, note that there is “considerable diversification into other types of construction activities (residential builders building shopping malls and office buildings).”

Gonzalez-Diaz et al (2000) identified a number of characteristics of construction that differentiates it from manufacturing. First, they argue, site specificity is not important because construction assets are mobile and relocating them is relatively inexpensive. Second, physical specificity will depend on the type of construction because the productive assets are usually designed for a particular kind of work or product and not for a particular project. Third, given that capital investment is small and technical knowledge widely spread, the risk of technological obsolescence is lower than in manufacturing. Subcontracting, they go on to argue, reduces the divergence of interests between the construction firm and the actual executors of each project, thereby reducing monitoring costs. Subcontracting, Gonzalez-Diaz et al (2000) point out, reduces the displacement expenses of workers and machines. Even if the construction firm tried to have direct access to the local labor market, the subcontractors would enjoy some advantages because they have a previous structure and superior knowledge of the local labor market. The variety of products offered by construction firms also likely increases subcontracting because it complicates monitoring and coordination. Subcontracting appears to grow “as the number of different products built by the firm and its specialization in design and technical management increase” (p184).

It is also apparent that employment in the construction industry is dominated by white males. Table 21 shows that, in 2007, females, blacks and Asians were less represented in construction and extraction occupations than they are in total employment nationally. Here we count both employees and the self-employed so the distribution relates to workers. In contrast, Hispanics are *over-represented*. They account for 14% of overall employment but 30% in construction. They are particularly important in as brick masons and stonemasons; drywall installers,; roofers; painters; helpers and laborers. Table 22 shows that this is a relatively recent phenomenon. The percent of Hispanics in construction occupations only rose from 20.3% in 2003 to 25.1% in 2006.

We should also note that the vast majority of firms in construction are *small*. According to *County Business Patterns* data for 2006, 64.2% of all US construction establishments had less than five employees.<sup>29</sup> The proportion in the Chicago-Naperville-Joliet, IL-IN-WI Metropolitan Statistical Area was slightly higher at 67.3%

|         | <b>USA</b> | <b>Chicago</b> |
|---------|------------|----------------|
| 1-4     | 64.23%     | 67.31%         |
| 5-9     | 16.68%     | 15.00%         |
| 10-19   | 9.98%      | 9.23%          |
| 20-49   | 6.13%      | 5.55%          |
| 50-99   | 1.85%      | 1.78%          |
| 100-249 | 0.87%      | 0.83%          |
| 250-499 | 0.19%      | 0.23%          |
| 500-999 | 0.06%      | 0.05%          |
| 1000+   | 0.02%      | 0.02%          |
| N       | 802,349    | 24,413         |

Over and above that there are huge numbers of 'non-employer' firms, that is businesses without paid employees.<sup>30</sup> The Census Bureau also provides estimates of their numbers using data based on tax return information of the Internal Revenue Service. For US construction as a whole in 2006 there were 2,549,239 such firms, more than times as many as those with employees, with total receipts of \$ 159,431,911,000. For Chicago-Naperville-Joliet, IL-IN-WI Metropolitan Statistical Area there 76,698 such firms with total receipts of \$ 4,520,767. The concern is that large numbers of these small firms will be forced to exit the industry as the construction industry contracts. Bates and Nucci (1990), for example found using data from the Characteristics of Business Owners Survey, compiled by the U.S. Bureau of the Census in 1987 that closure rates are inversely related to firm size. This was true whether "size" is measured by employment levels or gross sales revenues and that firms with no employees exhibit especially high rates of business discontinuance.

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<sup>29</sup> <http://censtats.census.gov/cgi-bin/cbpnaic/cbpsel.pl>

<sup>30</sup> <http://www.census.gov/epcd/nonemployer/index.html>



The construction sector is and will continue to be as the recession progresses, especially hard hit. It is well known to be an industry subject to boom and bust - it is now in a 'bust phase'.

#### **4. Entrepreneurship, Self-employment and Small firms**

We first look at the characteristics of *firms* according to who owns them. The vast majority of these firms are small. There are a very limited number of data files available in the United States at the level of the firm. Even where they do exist the researcher is frequently unable to obtain access to the micro-data e.g. the Survey of Business Owners. There are exceptions though e.g. the Survey of Small Business Finances. We then move on to look at the characteristics of the self-employed, where the unit of observation is the *individual*, and where we have do have much better data and where very detailed, and very large micro-data samples are readily available to the researcher. We look at data for all industries and explicitly for the construction sector and, when feasible for Chicago construction.

##### **a) Firms**

There are two main sources of data that are recently available on small firms and the racial and gender composition of their owners.

###### *i) 2002 Survey of Business Owners*

Data on the characteristics of firms owned by *minorities* are available from the 2002 Survey of Business Owners (SBO), conducted by the U.S. Census Bureau. The SBO defines minority-owned businesses as entities in which minorities own 51 percent or more of the stock or equity.

- In 2002, minorities owned approximately 18 percent of the 23 million U.S. firms.
- Blacks owned 5.0 percent of all U.S. firms, 1.8 percent of employer firms, and 5.9 percent of non-employer firms. Asians and Islanders owned 4.7 percent of all U.S. firms, 6.1 percent of employer firms, and 4.3 percent of non-employer firms. For comparison purposes, the percentages for Whites are 82.9, 88.0, and 81.4 respectively.
- Percentages of minority women owning businesses rose from 1997 to 2002: 29 percent of Black employer firms and 47 percent of Black non-employer firms were women-owned in 2002. In contrast, women owned 17 percent of White employer firms and 31 percent of White non-employer firms.
- On average, for every dollar that a White-owned firm made, Pacific Islander-owned firms made about 59 cents, Hispanic-, Native American-, and Asian-owned businesses made 56 cents, and Black-owned businesses made 43 cents.
- The distribution of firms varied by industry and race or ethnicity. For example, 16 percent of Native American-owned firms operated in construction; 20.5 percent of Black-owned firms were in health care and social assistance. Hispanic-owned businesses were

concentrated in administrative and support, waste management, and remediation services, 13.2 percent, as were Islander-owned businesses, 11.6 percent.

- More than half of Black-owned businesses had less than \$10,000 in business receipts in 2002, compared with one-third of White-owned firms and 28.8 percent of Asian-owned firms. This is illustrated below.

|                        | Hispanic | White | Black | Native American | Asian | Islander |
|------------------------|----------|-------|-------|-----------------|-------|----------|
| Less than \$5,000      | 20.8     | 20.6  | 30.0  | 26.9            | 15.9  | 25.3     |
| \$5,000 to \$9,999     | 19.1     | 13.1  | 20.8  | 18.1            | 12.9  | 21.3     |
| \$10,000 to \$24,999   | 24.8     | 17.7  | 24.6  | 21.5            | 18.1  | 20.6     |
| \$25,000 to \$49,999   | 12.1     | 12.1  | 10.5  | 12.0            | 12.6  | 10.1     |
| \$50,000 to \$99,999   | 8.8      | 10.5  | 6.2   | 8.4             | 11.0  | 7.5      |
| \$100,000 to \$249,999 | 7.1      | 10.9  | 4.3   | 6.6             | 12.8  | 7.7      |
| \$250,000 to \$499,999 | 3.3      | 5.9   | 1.7   | 3.0             | 7.4   | 3.3      |
| \$500,000 to \$999,999 | 2.1      | 4.2   | 1.0   | 1.7             | 4.7   | 1.7      |
| \$1,000,000 or more    | 1.9      | 5.0   | 0.9   | 1.8             | 4.5   | 2.5      |

- Most U.S. businesses have fewer than 10 employees. In 2002, 80 percent of White-owned employer firms had fewer than 10 employees; these small firms accounted for 21 percent of total receipts. Of firms owned by Asians, 84 percent had fewer than 10 workers and these businesses accounted for 39 percent of total Asian-owned business receipts.

- The vast majority of minority-owned construction firms in Chicago are small. Only 13% have employees. On average they have receipts of approximately \$200,000, For those without employees they had average receipts of \$30,000. The distribution of construction businesses in Chicago compared to nationally was as follows.

| Geography                                   | United States | Chicago   |
|---|---------------|-----------|
| Number of minority-owned firms              | 344,190       | 8,766     |
| Receipts (\$1,000)                          | 56,503,484    | 1,793,426 |
| Number of minority-owned employer firms     | 45,365        | 1,128     |
| Receipts for employers (\$1,000)            | 43,136,353    | 1,556,956 |
| Number of employees                         | 320,958       | 9,040     |
| Annual payroll (\$1,000)                    | 9,672,888     | 384,948   |
| Number of minority-owned non-employer firms | 298,825       | 7,638     |
| Receipts for non-employer firms (\$1,000)   | 13,367,131    | 236,470   |

- Owners use a variety of sources of capital to start or acquire businesses. Non-employer firm owners generally use a less varied array of financing sources than owners of firms with employees (Table 23). Higher percentages of male/female equally owned, male-owned, and White-owned employer firms than of other firm groups financed their startups or acquisitions through business loans from banks. Blacks and Hispanics were

less likely to use loans from banks. As we note in further detail below, this is often due to discrimination against them by banks.

Higher percentages of Black-and Native American-owned employer businesses, as well as equally men-and women-owned employer firms used business loans from the government or government-guaranteed bank loans. More than all other groups, Islander employers used personal and business credit cards to finance their startups and acquisitions.

- More than 50 percent of all owners of respondent firms reported that their business was their primary source of income in 2002: 70 percent of the owners of employer respondent firms and 44 percent of the owners of non-employer firms.
- According to the 2002 *Economic Census Survey of Business Owners*, of the 2,770,888 firms in construction, 2.4% were owned by African Americans; 7.0% by Hispanics; 1.1% by American Indians or Alaskan natives; 1.4% by Asians and Pacific Islanders and 10.5% by women. The representation of minorities in particular among the ownership of firms in construction is well below their representation in the population as a whole. As a proportion of the population, according to the 2007 Statistical Abstract of the United States Table 13, in 2005 African Americans were 12.3%; Hispanics 14.4%; Asian/Pacific Islanders 4.3%; American Indians/Alaskan Native 0.75% and two or more races 1.3%.<sup>31</sup> Over the period 2000-2005 the number of Hispanics grew by 20.9% and the number of Asians by 19.9% compared with 1.4% for whites and an overall growth in population for the US as a whole of 5.3%.

Data are also available on how the ownership of firms has changed over time by drawing comparisons with the 1997 SBO. [Table 24](#) summarizes. A number of facts stand out.

First, the number of firms owned by blacks, Hispanics, Asians and Women increased between 1997 and 2002 overall and in construction.

Second, there is an under-representation of minorities in the ownership of firms in comparison to their presence in the population.<sup>32</sup>

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<sup>31</sup> Large disparities between blacks and whites, for example, are also found in relation to *wealth* (Kennickel, 2003); *income* (Bound and Freeman, 1992; Chandra, 2003; Heckman, Lyons and Todd, 2000 and Smith and Welch, 1989), *educational achievement* (Jencks and Phillips, 1998); *out-of-wedlock childbearing* (Ventura and Bachrach, 2000), *health* (see Chandra and Skinner, 2003), *happiness* (Blanchflower and Oswald, 2004) *crime* (Freeman, 2000) and even *names* (Fryer and Leavitt, 2003). The degree of residential segregation by race, though lower today than in the past is still high (Cutler, Glaeser and Vigdor, 1999).

<sup>32</sup> According to the American Community Survey of 2005 and reported in Table 4, in the USA out of a population of 288,378,137, 66.8% were white; 14.5% Hispanic (of any race); 11.9% African American; 4.3% Asian; 0.1% Native Hawaiian; 0.7% Native American and 1.7% two or more races.

Third, the average number of employees of construction firms also increased from 8.4 to 9.6. The proportion of construction firms with employees fell.

Fourth, even though the number of firms owned by minorities and women has increased their size, measured on several dimensions has actually *declined*. Average sales fell for blacks in construction, for example, from \$136k to \$128k as did the average number of employees (from 0.9 to 0.6). Most dramatic was the decline in the proportion of black-owned firms with employees which fell from 23.0% of firms in 1997 to 11.6% in 2002.

*ii) 2003 Survey of Small Business Finances*

More recently a new wave of the Survey of Small Business Finances was made available by the Board of Governors of the Federal Reserve System.<sup>33</sup> This is the fourth survey of U.S. small businesses conducted by the Board of Governors. The survey gathered data from 4240 firms selected to be representative of small businesses operating in the US at the end of 2003. The survey covered a nationally representative sample of U.S. for profit, nonfinancial, non-subsidiary, non-agricultural, nongovernmental businesses with fewer than 500 employees that were in operation both at year end 2003 and at the time of interview. Most interviews took place between June 2004 and January 2005. The sample was drawn from the Dun and Bradstreet Market Identifier (DMI) file. The numbers of employees varied from zero to 486 with a weighted mean of 8.6 and an unweighted mean of 31.5, because larger businesses were over-sampled. Unlike previous surveys, for some inexplicable reason it did not over-sample minority-owned firms as the three previous surveys had.

Mach and Wolken (2006) reported using these data that 13.1% of firms were owned by non-white or Hispanic individuals; the share is statistically lower than in 1998 (14.6%). The shares for blacks and Asians each held roughly constant at 4%: the share of American Indians and Alaska natives held at roughly 1%. However the share of Hispanics fell a statistically significant amount from 5.6% to 4.2% which is somewhat surprising given the evidence that Hispanics are a growing share of the US population – up from 12.5% in 2000 to 14.5% in 2005 (Table 4). The percentage of firms owned by females also declined from 72.0% to 64.8%.

*Race, ethnicity, and sex of majority owners*

|                                  | N     | 2003 | 1998 |
|----------------------------------|-------|------|------|
| Nonwhite or Hispanic             | 484   | 13.0 | 14.6 |
| Non-Hispanic white               | 3,697 | 86.4 | 85.4 |
| White                            | 3,853 | 90.7 | 90.5 |
| Black                            | 119   | 3.7  | 4.2  |
| Asian or Pacific Islander        | 170   | 4.2  | 4.5  |
| American Indian or Alaska Native | 58    | 1.3  | .8   |
| Hispanic                         | 149   | 4.1  | 5.6  |
| Non-Hispanic                     | 4,032 | 95.6 | 94.4 |

<sup>33</sup> [www.federalreserve.gov/pubs/oss/oss3/ssbf03/ssbf03home.html](http://www.federalreserve.gov/pubs/oss/oss3/ssbf03/ssbf03home.html)

|                                  |       |      |      |
|----------------------------------|-------|------|------|
| Female                           | 783   | 22.3 | 24.3 |
| Male                             | 2,923 | 64.6 | 72.0 |
| Ownership equally divided by sex | 475   | 12.8 | 3.7  |

Source: Board of Governors of the Federal Reserve, 2007

It is apparent from these data that, on a variety of measures, firms owned by white males are larger than firms owned by minorities or white women. This is true by the number of employees; firm age, sales. White males also have more years of experience and higher net worth. Firms owned by blacks are especially small.

|                         | White Male | White Female | Black | Asian | Hispanic | Other Races |
|-------------------------|------------|--------------|-------|-------|----------|-------------|
| # employees             | 9.3        | 5.7          | 5.6   | 8.6   | 8.1      | 6.6         |
| Firm age                | 15.3       | 12.9         | 11.0  | 10.9  | 10.9     | 12.5        |
| Years of experience     | 20.8       | 16.5         | 14.3  | 16.2  | 14.9     | 19.6        |
| Sales (\$millions)      | 1.225      | .438         | .303  | 1.616 | .849     | 1.056       |
| Net worth (\$ millions) | .913       | .525         | .275  | .619  | .481     | .466        |

We now examine the legal organization of these firms. Only forty five percent of firms owned by white males are sole proprietors or partnerships compared with 68% of black-owned firms. The distribution of organizational status by race and gender of the firm's owners is as below.

|               | Sole proprietorship | Partnership | S-corporation | C-corporation | Other |
|---------------|---------------------|-------------|---------------|---------------|-------|
| White males   | 39                  | 6           | 34            | 15            | 6     |
| White females | 53                  | 6           | 26            | 11            | 4     |
| Black         | 61                  | 7           | 11            | 16            | 5     |
| Asian         | 34                  | 2           | 32            | 22            | 10    |
| Hispanics     | 45                  | 8           | 28            | 16            | 3     |
| Other races   | 44                  | 2           | 37            | 4             | 13    |
| Total         | 43                  | 5           | 31            | 14            | 7     |

Owners of firms that are classified as sole proprietors, partnerships or S-corporations will be classified as unincorporated self-employed. Multiple owners would each file as self-employed. Some, but not all, of those who file tax returns C-corporations will be incorporated self-employed. We now turn to examine data at the level of the *individual*.

### **b) Individuals**

We now move on to examine data at the level of the individual on the *self-employed*. Data are widely available from a number of government data sources, including the Censuses, the American Community Surveys and the Current Population Surveys (CPS). These data are available in published form; the micro-data are also widely available for researchers to download. Individuals report being unincorporated or incorporated self-employed in these data files. In the official government publications only the unincorporated self-employed are used to calculate a self-employment rate. In December

2008 according to the Basic Monthly file of the CPS 6.6% of US workers were unincorporated self-employed and 3.8% were incorporated self-employed.

A strong decline in agricultural self-employment (unincorporated plus incorporated) has been observed in the US and elsewhere over the last fifty years or so (Blanchflower, 2000). To put the US evidence in context, **Table 25** shows that self-employment rates, as a proportion of civilian employment in the US have declined since the 1960s. This is not typical across the Organisation of Economic Cooperation and Development (OECD) where quite different trends have been observed. According to OECD Labour Force Statistics which provides comparable civilian self-employment rates by country, rates have declined in all of the countries that have comparable data. It is perhaps unsurprising then that little evidence can be found between changes in self-employment and macro indicators such as changes in GDP per capita by country (Blanchflower and Shadforth, 2007). Also of note is that rates of self-employment in the US are low by international standards. In **Table 25** for 2005 the US ranked 28<sup>th</sup> out of 29 countries. Self-employment is especially high in poorer countries.

I now examine changes in self-employment that has occurred since the early 1980s in the United States, using data at both the individual and the (small) firm level. Data on random samples of twenty five million individuals are examined taken from the Basic Monthly files of the CPS (BMCPs) from 1983-2008, the 2000 census and the 2007 American Community Survey (ACS). In contrast to the official definition of self-employment which simply counts the numbers of unincorporated self-employed, I also include the incorporated self-employed who are paid wages and salaries. This definition of self-employment is more comparable to that used internationally (Blanchflower, 2000, 2004 and Blanchflower and Shadforth, 2007).

A major research question for scholars has been to understand why the self-employment rate of minorities in general and blacks in particular is so low. For example in 2008, using data on non-agricultural self-employment from the *BMCPs*, defined to include both incorporated and unincorporated, I calculate the following weighted self-employment rates.<sup>34</sup>

|                     | All industries | Construction | Chicago<br>Construction |
|---------------------|----------------|--------------|-------------------------|
| All                 | 10.4%          | 25.4%        | 22.1%                   |
| Males               | 13.0%          | 26.0%        | 23.1%                   |
| Females             | 7.4%           | 20.0%        | 14.4%                   |
| Whites (non-Latino) | 11.6%          | 29.2%        | 29.3%                   |
| White males         | 14.5%          | 30.2%        | 30.9%                   |
| White female        | 8.3%           | 21.8%        | 19.2%                   |
| Black               | 5.7%           | 23.7%        | 12.8%                   |
| Black males         | 7.9%           | 25.3%        | 16.0%                   |
| Black females       | 3.8%           | 11.8%        | ~                       |

<sup>34</sup> <http://people.ucsc.edu/~fairlie/serates/sesex7903data.xls>

|                  |       |       |       |
|------------------|-------|-------|-------|
| Asians           | 10.7% | 22.7% | 24.9% |
| Asian males      | 12.4% | 25.0% | 24.9% |
| Asian females    | 8.8%  | 6.1%  | n/a   |
| Hispanics        | 8.2%  | 15.8% | 6.6%  |
| Hispanic males   | 9.8%  | 15.9% | 6.9%  |
| Hispanic females | 5.7%  | 13.3% | ~     |

~ means <20 observations

Just over one in ten workers in the US are self-employed; one in seven white males are self-employed. Interestingly Asian women have higher self-employment rates than white women (8.8% and 8.3% respectively).<sup>35</sup> Particularly striking though is the very low self-employment rates for blacks and to a lesser extent Hispanics. Self-employment rates are especially high in construction where around one in four workers nationally are self-employed. Rates are low for Hispanic males and minority females. Self-employment rates are especially low for Hispanics in Chicago construction. Rates are also low for blacks in Chicago construction.

A continuing puzzle in the literature in the U.S. has been to determine why this is so. Fairlie and Meyer (2000), rule out a number of explanations for the difference in the self-employment rates of white and black males. They found that trends in demographic factors, including the Great Migration and the racial convergence in education levels “did not have large effects on the trend in the racial gap in self-employment” (p. 662). They also found that an initial lack of business experience “cannot explain the current low levels of black self-employment.” Further, they found that “the lack of traditions in business enterprise among blacks that resulted from slavery cannot explain a substantial part of the current racial gap in self-employment” (p. 664). Fairlie (1999) and Wainwright (2000) have shown that a considerable part of the explanation of the differences between the African American and white self-employment rate can be attributed to discrimination. Bates (1989) finds strong supporting evidence that racial differences in levels of financial capital have significant effects upon racial patterns in business failure rates. Fairlie (1999) also found that the black exit rate from self-employment is twice as high as that of whites.

Another important determinant of being self-employed that has been identified in the literature is having a self-employed parent. The probability of self-employment is substantially higher among the children of business owners than among the children of non-business owners (see Dunn and Holtz-Eakin, 2000, and Hout and Rosen, 2000). These studies generally find that an individual who had a self-employed parent is roughly two to three times more likely to be self-employed than someone who did not have a self-employed parent. More recently Fairlie and Robb (2007a) have demonstrated using data from the 1992 *Characteristics of Business Owners (CBO) Survey* that more than half of all business owners had a self-employed family member prior to starting their business.

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<sup>35</sup> The CPS does not allow identification of Asians and Native Americans prior to 1989.

Conditional on having a self-employed family member, less than 50 percent of small business owners worked in that family member's business suggesting that it is unlikely that intergenerational links in self-employment are largely due to the acquisition of general and specific business human capital and that instead similarities across family members in entrepreneurial preferences may explain part of the relationship. In contrast, estimates from regression models *conditioning* on business ownership indicated that having a self-employed family member plays only a minor role in determining small business outcomes, whereas the business human capital acquired from prior work experience in a family member's business appears to be very important for business success. Estimates from the CBO also indicated that only 1.6 percent of all small businesses are inherited suggesting that the role of business inheritances in determining intergenerational links in self-employment is limited at best.

Using the same *1992 Characteristics of Business Owners (CBO) Survey*, Fairlie and Robb (2007b) examined why African-American owned businesses lag substantially behind white-owned businesses in sales, profits, employment, and survival. Black business owners, they found, were much less likely than white owners to have had a self-employed family member owner prior to starting their business and are less likely to have worked in that family member's business. They found further that the lack of prior work experience in a family business among black business owners, perhaps by limiting their acquisition of general and specific business human capital, negatively affects black business outcomes

The gap between the black and white male self-employment rates has persisted for the best part of a century. As Fairlie and Meyer (2000) note:

“The constancy of the black/white ratio is surprising in light of the substantial gains blacks have made in education, earnings and civil rights during the twentieth century...and the numerous government programs created to promote minority business ownership” (p. 656)

In contrast, there has been a striking growth over time in the self-employment rate of females. Devine (1994) showed, using the *March Current Population Survey* data that the number of self-employed females aged 18-64 in the non-agricultural sector increased by 2.2 million or 145 percent between 1975 and 1990. This represented an increase in the self-employment rate from 4 percent to 6.6 percent.

There has also been substantial growth in the numbers of self-employed among Hispanics and the number of Hispanic businesses mostly reflecting the increase in their numbers in the population. The number of Hispanic owned businesses, for example, has grown substantially over the past couple of decades. Fairlie (2004) showed that there were 435,000 more Hispanic business owners in 1998 than in 1979, representing a growth rate of 193 percent. The most recent results from the *Hispanic-Owned Firms: 2002* (U.S. Department of Commerce 2006) show that 1.57 million Hispanic-owned businesses operate in the United States. The significant growth rate of 31 percent (three times the rate of the national average, 10 percent) between 1997 and 2002 among Latino establishments has outpaced all other U.S. populations. Fairlie (2004) also noted that the



growth in the number of Hispanic self-employed over the period using the Outgoing Rotation Group files of the Current Population Survey from the beginning of the 1980s to the end of the 1990s was especially pronounced both overall and in construction. The growth rates, in construction reported by Fairlie (2004, Table 1) over this period were 34% for whites; 72% for blacks and 154% for Hispanics.<sup>36</sup>

A recently published book by Robert Fairlie and Alicia Robb called Race and Entrepreneurial Success Black-, Asian-, and White-Owned Businesses in the United States (2008) examined racial differences in business outcomes in the US. A good deal of their results are based upon data from the micro data from the 1992 Characteristics of Business Owners (CBO), conducted by the U.S. Census Bureau<sup>37</sup>. A good deal of this evidence is considerably out of date given it is seventeen years old, but is of interest given that the survey they use contains detailed information on the characteristics of owners and firms. Their main findings were as follows.

1. African Americans and Latinos are substantially less likely to own a business than are whites and Asian Americans. In the past few years, however, they found some evidence of rising black and Latino business-ownership rates.
2. Black-owned businesses have lower sales and profits, hire fewer employees, have smaller payrolls, and have higher closure rates than white-owned businesses. For most outcomes, the disparities are extremely large. For example, estimates from the 2002 SBO indicate that white-owned firms have average sales of \$439,579 compared with only \$74,018 for those owned by blacks.
3. Although white firms generally outperform Asian firms when examining data for all businesses, Asian firms clearly have the strongest performance among all major racial and ethnic groups after removing small-scale businesses. Estimates from 1992 CBO micro data indicate that Asian-owned firms had higher sales and profits, are more likely to hire employees, and are less likely to close than white-owned firms.
4. Estimates from the SBO/SMOBE data also indicate substantially worse outcomes among Latino-owned firms than white-owned firms. Latino-owned businesses have lower average sales, are less likely to hire employees, and hire fewer employees than white-owned businesses. Estimates from their Characteristics of Business Owners (CBO) sample, however, do not reveal large disparities in business outcomes between Latino-owned firms and white-owned firms.

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<sup>36</sup> For a discussions of Hispanic self-employment and entrepreneurship see Robles and Cordero-Guzmán (2007); Olson et al (2000); Mora and Da´vila (2006) and Zuiker et al (2003). In a recent review Robles and Cordero-Guzmán (2007) suggest that educational attainment rates, individual or family personal wealth, customer demographics, age of enterprise, age of owner, and particularly access to financial capital are significant variables in explaining Latino self-employment rates and business ownership success and failure.

<sup>37</sup> This was the same database used by Tim Bates in his report in the BAGC case. See, Tim Bates 'Rule 26(a)(2)(B) Report of Expert Witness Professor Timothy Bates', defendant's Exhibit 392G.

5. *Trends in minority business outcomes do not indicate improvement relative to white business outcomes in the past two decades (my italics).*

6. Intergenerational links in business ownership are strong. Estimates from the CBO indicate that more than half of all business owners had a self-employed family member prior to starting their business. Where there was a self-employed family member, fewer than half of small business owners worked in that family member's business. On the other hand, only a very small percentage of all small businesses were inherited.

7. Estimates from regression models for small business outcomes conditioning on business ownership conducted by Fairlie and Robb indicate that having a self-employed family member plays only a minor role. In contrast, prior work experience in that family member's business has a large positive effect on business outcomes. Working in a family member's business may provide opportunities for acquiring valuable specific and general business human capital. Regression estimates also indicate that inherited businesses are more successful on average than non-inherited businesses, but their limited representation in the population of small businesses suggests that they are not a major determinant of business outcomes.

8. Fairlie and Robb (2008) also found evidence that other forms of human capital and business human capital—the owner's education level and prior work experience in a business whose goods and services were similar to those provided by the owner's business—are important determinants of business outcomes.

9. Estimates from the CBO indicate a strong positive relationship between startup capital and business outcomes. Firms with higher levels of startup capital are less likely to close and are more likely to have higher profits and sales and to hire employees. The estimated positive relationship is consistent with the inability of some entrepreneurs to obtain the optimal level of startup capital because of liquidity constraints.

10. The median level of wealth for blacks was \$6,166, compared with \$67,000 for whites. They found that black-owned businesses start with substantially lower levels of financial capital than white-owned firms. Using a nonlinear decomposition technique, they found that the black/ white disparity in startup capital is the largest single factor contributing to racial disparities in closure rates, profits, employment, and sales.

11. Estimates from the CBO indicate that black business owners have a relatively disadvantaged family-business background compared with white business owners. Black business owners are much less likely than white business owners to have had a self-employed family member owner prior to starting their business and are less likely to have worked in that family member's business. They did not find sizeable racial differences in the inheritance of businesses.

12. Fairlie and Robb (2008) found that the relatively low probability of having a self-employed family member prior to business startup among blacks does not generally

contribute to racial differences in small business outcomes. Instead, the lack of prior work experience in a family business among black business owners, perhaps by limiting their acquisition of general and specific business human capital, negatively affects black business outcomes. There was evidence that limited opportunities for acquiring specific business human capital through work experience in businesses providing similar goods and services contribute to worse business outcomes among blacks.

13. Only 17.6 percent of blacks have a college education compared with 28.2 percent of whites. Black business owners are also found to have lower levels of education than white business owners, on average. These racial differences in education were found to contribute significantly to the observed racial disparities in business outcomes.

14. Fairlie and Robb (2008) found that the most important factor in the higher survival rates, profits, employment, and sales of Asian-owned firms is that Asian Americans invest more startup capital in their firms than whites. This factor alone explains 57 to 100 percent of the difference in outcomes between Asian and white firms.

15. Nearly half of all Asian American business owners are college educated, which follows the pattern of high levels of education in the Asian American population more generally. Higher levels of education among Asian business owners, who are 80 percent foreign born, explain a large fraction of the better outcomes in Asian- compared with white-owned businesses.

16. The relative success of Asian-owned businesses is not due to having advantaged family-business backgrounds. In fact, Asian business owners are less likely than white business owners to have a self-employed family member prior to business startup and are less likely to work in that family business.

In other work Fairlie and Robb (2009a) found, using the 1992 CBO data, that Asian-owned businesses are more successful than white-owned businesses for two main reasons – Asian owners have high levels of human capital and their businesses have substantial startup capital. Asian firms were 16.9 percent less likely to close, 20.6 percent more likely to have profits of at least \$10,000, and 27.2 percent more likely to hire employees than white firms. They also had mean annual sales that are roughly 60 percent higher than the mean sales of white-owned firms. These differences, the authors suggest, imply that Asian firms are also substantially more successful on average than are firms owned by other major minority groups. Asian business owners were found to have relatively high levels of education. Forty-six percent of Asian business owners have a college degree, compared with 33 percent of white business owners.

Fairlie and Woodruff (2007) analyzed of Mexican-American entrepreneurship using microdata from the 2000 U.S. Census, the matched and unmatched March and Outgoing Rotation Group Files of the Current Population Survey from 1994 to 2004, and the Legalized Population Survey (LPS). They found that low levels of education and wealth 'explain the entire gap between Mexican immigrants and non-Latino whites in business formation rates'. Nearly the entire gap in business income for Mexican immigrants is

explained by low levels of education and limited English language ability. Using the natural experiment created by the Immigration Reform and Control Act (IRCA), they reported that legal status represents an additional barrier for Mexican immigrants. They estimate that the lack of legal status reduces business ownership rates by roughly seven-tenths of a percentage point for both men and women. Human and financial capital deficiencies were found to limit business ownership and business success among second and third-generation Mexican-Americans, but to a lesser extent.

## **5. The Construction Industry and Affirmative Action Programs**

We now turn to explicitly consider the construction industry, which accounts for nearly one fifth of all self-employed workers. There is evidence of discrimination against minorities and women in that industry - by construction firms, unions and lenders in particular. As a result of such discrimination a number of public authorities, at the federal, state and local levels, have implemented affirmative action programs. These programs have dominantly, but not exclusively, been in construction. The main reason for this is that construction dollars are the main part of discretionary public sector spending. Such programs have been subject to a number of legislative challenges that I discuss in some detail below.

In 2006, approximately 11.75 million workers, or approximately 8.1 per cent of total employment in the United States, held a construction job of whom 9.6% (46.3 %) were female; 5.5% (10.9%) were black or African-American and 25.1% (13.6%) were Latino or Hispanic with US aggregates for all workers in parentheses.<sup>38</sup> The representation of minorities in particular among the ownership of firms in construction is well below their representation in the population as a whole. According to the *2002 Economic Census Survey of Business Owners*, of the 2,770,888 firms in construction, 2.4% were owned by African Americans; 7.0% by Hispanics; 1.1% by American Indians or Alaskan natives; 1.4% by Asians and Pacific Islanders and 10.5% by women. As a proportion of the population, according to the 2008 Statistical Abstract of the United States Table 13, in 2006 African Americans were 12.8%; white Hispanics 13.7%; Asian/Pacific Islanders 4.6%; American Indians/Alaskan Native 1.0% and two or more races 1.8%.

Ray Marshall (2000) has noted that there are several factors that make the construction industry especially important for minority development because it "provides opportunity for upward occupational mobility since workers commonly become managers and contractors". Glover (1977) notes that minorities have a long tradition in this industry as laborers, skilled workers and contractors and that it is possible to increase minority employment and income more effectively in construction than is the case with most other minority businesses.

There is a good deal of evidence to suggest that the under-representation of women and minorities in construction especially is due to widespread and pervasive *discrimination*

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<sup>38</sup> Source: Table 602 Statistical Abstract of the United States 2008 downloadable at [http://www.census.gov/compendia/statab/cats/labor\\_force\\_employment\\_earnings.html](http://www.census.gov/compendia/statab/cats/labor_force_employment_earnings.html)

that has changed little over time. Not only is the proportion of firms owned by African Americans especially relatively low, so also are their representation in the construction workforce in general and in self-employment in particular. Where firms owned by minorities and women do exist in construction they are more likely than non-minority males to be in special trades rather than heavy and civil. They are also more likely to be sub-contractors than prime contractors. This does not appear to be because of a lack of an ability to expand to undertake these activities because it is well-known that small construction companies can expand rapidly as demand changes by hiring workers and renting equipment and making use of sub-contractors. A particular concern in construction is that it is hard for minority and women-owned firms to obtain capital, especially working capital, and this causes increased difficulties when bonds have to be posted. This is often made more difficult still when bonding firms are members of local construction associations. Also unions are pervasive in the sector and these unions have tended to be dominated by white males who have successfully controlled entry to craft jobs (Ashenfelter, 1972 and Bloch, 2001).

Minorities seeking employment in construction have traditionally been frustrated by entrenched industry networks that parcel out the better jobs to white males (Silver, 1986). The dominant explanation of persistent minority disadvantage in construction is succinctly summarized by Waldinger and Bailey: "Beneath the complicated regulations and proliferation of collective bargaining contracts lie a different reality, one dominated mainly by personal contracts and informal networks" (1991, p. 298). Even when minorities are able to acquire the skills required for entry into the construction trades, they are nonetheless outsiders in a world where insider networks shape access to the most attractive jobs.

Construction projects especially in the public sector are frequently subject to competitive *bidding* procedures. There is some evidence to suggest that there is collusion among bidders. Typically governments award contracts for construction of highways and buildings through low-price sealed bid auctions. On the day of the auction sealed bids are publicly reported along with complete information about the bidder's identity and bids and the project is awarded to the lowest bidder. In a study of bidding in highway construction projects in Florida from 1981-1986 Gupta (2002) found that bid prices fall as the number of bidders increase. Gupta concluded that "collusion is commonplace in these markets," (p.22, 2002).

Affirmative action programs in construction were implemented in the 1970s and 1980s in many jurisdictions, at the local, state and federal level, to help overcome some of these problems (Blanchflower and Wainwright, 2005; Chay and Fairlie, 1998). During this period then the proportion of public sector construction dollars going to firms owned by women and minorities increased. One thing that makes construction an attractive sector for affirmative action is the relatively large importance of the government in that sector – hence more leverage. Total spending on construction in February 2008 was estimated at a seasonally adjusted annual rate of \$1,121.6 billion. Of this 73.7% was private, made up of 40.7% private residential and 32.9% private non-residential; of the remainder 24.5% state and local and 1.8% federal (Source:

<http://www.census.gov/const/www/prpage.html>). The proportion of total construction accounted for by the public sector has increased recently, as the private residential sector has declined.<sup>39</sup> Even in construction though, the private sector is far larger than the public sector. So even with affirmative action in place the public sector is still only a relatively small slice of the overall economy.

There is a presumption underlying all of this legislation that discrimination against minorities and women in business, and especially in the construction industries where much of the legislation has focused, continues to persist. Senator Lautenberg, for example, stated during the course of Senate hearings in relation to TEA-21.

“Jim Crow laws were wiped off the books over 30 years ago. However, their pernicious effects on the construction industry remain. Transportation construction has historically relied on the old boy network which, until the last decade, was almost exclusively a white, old boy network. ... This is an industry that relies heavily on business friendships and relationships established decades, sometimes generations, ago — years before minority-owned firms were even allowed to compete.”<sup>40</sup>

The U.S. Supreme Court's decision in *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989), established the current constitutional contours of permissible race-based public contracting programs. Reversing long established law, the U.S. Supreme Court for the first time extended the highest level of judicial examination to legislation to benefit rather than injure the historic victims of discrimination. However benign the government's motive, race is now always so suspect a classification that its use must now pass the highest constitutional test of “strict scrutiny.”

In addition to the federal government many cities and states had adopted demand-side goals programs and supply-side technical assistance programs. Frequently these covered a range of minority groupings and often white females. After *Croson*, during the 1990s numerous city, state, and federal programs that had race conscious components were challenged in the courts and, in most cases, ruled unconstitutional. Important cases include: City of Richmond; City of Philadelphia; City of Columbus; Fulton County, Georgia (Atlanta); Dade County, Florida (Miami); King County, Washington (Seattle); Cook County, Illinois (Chicago); Hillsborough County, Florida (Ft. Lauderdale); the District of Columbia; the State of Ohio, the State of Florida, and the Michigan DOT. In some jurisdictions a settlement was reached before the courts ruled and the program was dropped entirely such as in the South Florida Water Management District, the City of Charlotte and the City of Memphis. At the end of the 1990s the State of Texas DOT

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<sup>39</sup> In contrast in February 2004 private construction seasonally adjusted accounted for 77.6% and private residential 54.2% of total construction respectively - <http://www.census.gov/const/C30/pr200402.xls>. Private residential construction was \$696,019 millions in February 2006 compared with \$456,923 millions in February 2008. <http://www.census.gov/const/C30/residentialsa.xls>

<sup>40</sup> p. 5101 Federal Register / Vol. 64, No. 21 / Tuesday, February 2, 1999 / Rules and Regulations.

added white males to its program effectively making the program race-neutral, while the State of Maryland and the City of Jacksonville adopted revised race-conscious programs. In other jurisdictions such as the City of Columbus and the New Jersey DOT race conscious programs were replaced with programs that were entirely race blind.<sup>41</sup> Other jurisdictions dropped their programs for fear of being sued.

Since the turn of the millennium there have been a number of court cases that have reversed the immediate post-*Croson* trend finding affirmative action programs to be constitutional. These include *Sherbrooke Turf v. Minnesota DOT* and *Gross Seed v. Nebraska DOT* from 2003 that related to the federal DBE program.<sup>42</sup> Here, the courts ruled that the U.S. Congress had established ‘compelling interest’ and that the state programs were ‘narrowly tailored.’ In both these cases the U.S. Department of Justice and the U.S. Department of Transportation acted as intervenors, with the U.S. government defending the programs.<sup>43</sup> Recently the U.S. District Court in Illinois, in the case of *Northern Contracting Inc vs. the State of Illinois Department of Transportation (IDOT)*, ruled in favor of IDOT, citing the findings in the *Sherbrooke Turf* case as precedent, finding a compelling need for IDOT’s plan which was “narrowly tailored to the goal of remedying the effects of racial and gender discrimination within the construction industry.”<sup>44</sup> In a similar case relating to the federal DBE program of *Western States Paving v. State of Washington Department of Transportation (WsDOT)*, the court granted the defendant summary judgment dismissing the case but this was overturned in part on appeal to the 9<sup>th</sup> Circuit Court of Appeals because WsDOT did not offer any evidence of discrimination in the Washington state construction industry and hence their program was not narrowly tailored. The 9<sup>th</sup> Circuit did, however, find the DBE Program constitutional on its face.

Two further cases relate to programs established not by the federal government with the approval of Congress, but by two cities - Denver and Chicago. In *Concrete Works v. the City and County of Denver*<sup>45</sup> and in *Builders Association of Greater Chicago (BAGC) v.*

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<sup>41</sup> Whether affirmative action procurement programs that benefit women are subject to the lesser constitutional standard of ‘intermediate scrutiny’ has yet to be settled by the Supreme Court.

<sup>42</sup> *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation, et al*, No.02-1665 (8<sup>th</sup> Cir. October 6, 2003) (*Sherbrooke III*), and *Gross Seed Company v. Nebraska Department of Roads, et al*, No. 02-3016 (8<sup>th</sup> Cir. October 6, 2003).

<sup>43</sup> Appellee briefs filed by the U.S. Government in the district court in *Western States*, and in both the district and the 8<sup>th</sup> Circuit Court of Appeal in *Sherbrooke Turf* and *Gross Seed*, along with the court decisions are available at [http://www.usdoj.gov/crt/app/briefs\\_aa.htm](http://www.usdoj.gov/crt/app/briefs_aa.htm)

<sup>44</sup> *Northern Contracting Inc v. the State of Illinois Department of Transportation* (N.D., Il.), No. 00C4515 September 8<sup>th</sup> 2005, p. 52.

<sup>45</sup> The City of Denver created an affirmative action ordinance establishing participation goals for minority- and women-owned contractors on certain City construction and design projects. A non-minority-owned firm challenged the constitutionality of this ordinance in 1992. In 1993, the district court’s grant of summary judgment in favor of Denver was reversed on appeal and the case was remanded for trial. A

*City of Chicago* affirmative action programs for MWBEs in construction were challenged as unconstitutional. The defendants did not have the benefit of arguing that Congress had established compelling interest and thus had a higher bar to reach since they had to establish compelling interest themselves within their own jurisdictions. Despite this, after lengthy trials, defendants in both cases successfully argued they had established a compelling interest in having their programs and in the *Concrete Works* case, after a decision of the 10<sup>th</sup> Circuit Court of Appeals overturning the lower court's decision, that the program was narrowly tailored.<sup>46</sup> The U.S. Supreme Court refused to overturn the 8<sup>th</sup> and 10<sup>th</sup> Circuit Appeals Court decisions respectively in *Concrete Works*, *Sherbrooke Turf* and *Gross Seed* by refusing to grant writs of *certiorari*. In the *Concrete Works* case, however, Justices Scalia and Rehnquist wrote a dissent from denial of *certiorari*.<sup>47</sup> In the BAGC case the district court temporarily enjoined the program but in December 2003 Judge Moran ruled the City of Chicago had a 'compelling interest' in eradicating discrimination and permitted it to take steps to narrowly tailor its program, which it did a few months later when it introduced a new program.<sup>48</sup>

As part of these legal cases the defendants provided anecdotal evidence from the owners of MWBEs to the courts on discriminatory networks in contracting. This evidence is of particular interest as it was provided under oath under threat of perjury. The Appeals Court in the *Concrete Works* case summarized the anecdotal evidence of discrimination in construction in Denver in graphic detail as follows.

"The district court's memorandum and order contains a comprehensive synopsis of the anecdotal evidence presented by Denver at trial.... That evidence was extensive and included the testimony of the senior vice-president of a large, majority-owned construction firm who stated that when he worked in Denver, he received credible complaints from minority and women-owned construction

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bench trial was held in and in 2000, the district court enjoined Denver from enforcing the ordinance, thus halting the affirmative action program. Denver appealed, and on February 10, 2003 the 10th Circuit Court of Appeals overturned the 2000 ruling and upheld Denver's program. On November 17, 2003 the U.S. Supreme Court rejected a constitutional challenge to the same Denver program, letting the 10th Circuit's ruling stand.

<sup>46</sup> Initially the trial court in *Concrete Works* found the program unconstitutional but the district court's decision was overturned by the 10<sup>th</sup> Circuit Court of Appeals. In both the *Gross Seed* and *Sherbrooke Turf* cases the 8<sup>th</sup> Circuit Court of Appeals, in an opinion where it consolidated the two cases, upheld the lower court's decision that Congress had established compelling interest for the programs and that defendants had established them to be narrowly tailored.

<sup>47</sup> In *Concrete Works* the U.S. government filed amicus briefs on the side of the City and County of Denver with the 10<sup>th</sup> Court of Appeals opposing the district court's decision declaring the program unconstitutional. See <http://www.usdoj.gov/crt/briefs/concrete.htm>. The 10<sup>th</sup> Circuit Court of Appeals decision is available at [http://www.usdoj.gov/crt/app/briefs\\_aa.htm](http://www.usdoj.gov/crt/app/briefs_aa.htm). The U.S. Supreme Court dissent by Scalia and Rehnquist in *Concrete Works* is available at [www.supremecourtus.gov/opinions/03pdf/02-1673.pdf](http://www.supremecourtus.gov/opinions/03pdf/02-1673.pdf).

<sup>48</sup> The author acted as defendant's expert at trial in *Concrete Works*, *Sherbrooke Turf*, *Gross Seed* and *BAGC*.



firms that they were subject to different work rules than majority-owned firms. He also testified that he frequently observed graffiti containing racial or gender epithets written on job sites in the Denver metropolitan area. Further, he stated that he believed, based on his personal experiences, that many majority-owned firms refused to hire minority or women-owned subcontractors because they believed those firms were not competent.

Several M/WBE witnesses testified that they experienced difficulty pre-qualifying for private sector projects and projects with the City and other governmental entities in Colorado.... One individual testified that her company was required to pre-qualify for a private sector project while no similar requirement was imposed on majority-owned firms. Several others testified that they attempted to pre-qualify for projects but their applications were denied even though they met the prequalification requirements.

Other MWBEs testified that their bids were rejected even when they were the lowest bidder; that they believed they were paid more slowly than majority-owned firms on both City projects and private sector projects; that they were charged more for supplies and materials; that they were required to do additional work not part of the subcontracting arrangement; and that they found it difficult to join unions and trade associations. .... There was extensive testimony detailing the difficulties MWBEs experienced in obtaining lines of credit. One WBE testified that she was given a false explanation of why her loan was declined; another testified that the lending institution required the co-signature of her husband even though her husband, who also owned a construction firm, was not required to obtain her co-signature; a third testified that the bank required her father to be involved in the lending negotiations.

The most poignant anecdotal testimony involved recitations of racially- and gender-motivated harassment experienced by MWBEs at work sites. Women were called "bitches" and Blacks were called "n\*\*\*\*\*r" or "dumb n\*\*\*\*\*r." One seventy-three year old truck driver was called a "dumb, f---ing Mexican." Even more disturbing was the testimony that minority and female employees working on construction projects were physically assaulted and fondled, spat upon with chewing tobacco, and pelted with two-inch bolts thrown by males from a height of eighty feet." (Decision of the United States Court of Appeals 10<sup>th</sup> Circuit overturning the district court decision that the Ordinance was unconstitutional." *Concrete Works of Colorado., Inc. v. Denver*, 86 F. Supp. 2d 1042 (D. Colo. Mar. 7, 2000).<sup>49</sup>

In addition owners of MWBEs reported in a number of jurisdictions that, even though they had performed successfully on public sector projects with goals they were not hired

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<sup>49</sup> Available at [http://www.usdoj.gov/crt/app/briefs\\_aa.htm](http://www.usdoj.gov/crt/app/briefs_aa.htm)

on private sector jobs without goals. For example, Judge Moran in his decision in the BAGC case summarized some of the anecdotal testimony as follows.<sup>50</sup>

"A pervasive theme of that testimony was that the MWBE firm was not solicited, or seldom solicited, for non-goals work, even though it was eager and available to do that work. Another was a METRA survey of MWBEs in which approximately 50% of those responding reported that they were seldom or never solicited for non-goals work". Moran, (2003).<sup>51</sup>

There is evidence since the 1980s in the United States that race and gender conscious affirmative action programs in construction and elsewhere can have a substantial impact. Enchautegui et al (1997) found that there are substantial disparities between the share of public contract dollars received by minority-owned firms and the share of all firms that they represent. The difference in these disparities is especially marked between jurisdictions which have affirmative action programs and those that have never had them or removed them. The disparities are much less where affirmative action programs exist.

Chay and Fairlie (1998) examined whether the set-aside programs established in many of the largest U.S. cities during the 1980s had an impact on the self-employment rates of blacks and whites. Their analysis was based on data from the *Current Population Survey* for 1979-1988. They stopped at 1988 since the 1989 Croson decision led to the dismantling of set-aside programs in many cities. They had some difficulty in ascertaining the exact starting dates of a number of the programs because there were inconsistencies in the data sources used. The paper examined what happened to self-employment rates when programs were introduced. They found that self-employment rates in construction for black men increased from about 12% before the programs were introduced to about 18% after. On the other hand, rates for white men were relatively stable before and after the programs were passed. Chay and Fairlie argued that "these figures provide strong evidence that set-aside programs worked".

Fairlie and Marion (2008) utilize the elimination of affirmative action in California and Washington through voter initiatives to identify the effect of affirmative action on minority and female self-employment rates. They found that self-employment rates *rose* for most race-gender groups in both California and Washington after the elimination of affirmative action. This suggests that eliminating affirmative action may have lowered the opportunity cost of starting a business by restricting opportunities in the traditional labor market. This is consistent with Myers (2007) who finds significant adverse employment effects following the elimination of affirmative action in California due to Proposition 209.

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<sup>50</sup> Decision in *Builder's Association of Greater Chicago vs. City of Chicago* in the US District Court for the Northern District of Illinois Eastern Division (96C1122) by Judge James B. Moran December 29<sup>th</sup> 2003.

<sup>51</sup> Chicago METRA oversees all commuter rail operations in the 3,700 square mile northeastern Illinois region, with responsibility for day-to-day operations, fare and service levels, capital improvements and planning see [www.metrarail.com](http://www.metrarail.com)

Given the existence of Prevailing Wage Laws<sup>52</sup> and widespread affirmative action programs it is of interest to determine whether the position of women and minorities in the construction sector has improved or worsened over time. It is very difficult to obtain any precise time line on the implementation of the various programs over time given that there is no definitive data source. Hence, in what follows I examine the change in self-employment post-Croson, which occurred in 1989 as well as post 2000 when affirmative action programs in construction appear to have received a new lease of life.

## 6. Empirical evidence on the incidence of self-employment

In this section I concentrate on examining econometrically publicly available, nationally representative, micro-data on *individuals*. I have data both on the unincorporated self-employed as well as the incorporated self-employed who receive wages and salaries but are not counted as part of the official self-employment rate in the U.S. government counts. I initially present the data on the mean self-employment rate (i.e. the proportion of workers that are self-employed - incorporated plus unincorporated). I then model the probability of a randomly selected individual taken from these surveys will be self-employed, conditional on their characteristics. Hence these are *ceteris paribus* effects that is they are true holding constant other characteristics and are thus may be considered to be partial derivatives.

**Table 26** presents new evidence on self-employment rates by race and gender for the period 1983-2008 using data from the *Basic Monthly* files of the *Current Population Survey* (BMCPs).<sup>53</sup> Information on the BMCPs and the micro data files themselves are publicly available from a number of sources. These include the National Bureau of Economic Research that provides documentation and all of the data files from January 1976 ([http://www.nber.org/data/cps\\_basic.html](http://www.nber.org/data/cps_basic.html)). The Bureau of Labor statistics also maintains a Current Population Survey page where documentation(<http://www.census.gov/cps/>) and data (from 1996) can be obtained ([http://www.bls.census.gov/cps\\_ftp.html](http://www.bls.census.gov/cps_ftp.html)). Unicon Research Corporation is a commercial provider of the BMCPs (<http://www.unicon.com/>). These data are used in **Tables 27-31** also.

I calculated weighted estimates using the BMCPs for each year and then averaged over groupings of years for all industries separately for white non-Hispanic males, white non-

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<sup>52</sup> Prevailing Wage Laws (PWLS) exist at the federal level and in addition the majority of states have their own PWLS. The intent of such legislation is primarily to protect the local wage rates in construction. These laws appear to have only small impacts on construction labor markets (Kessler and Katz, 2001).

<sup>53</sup> The Merged Outgoing Rotation Group files of the CPS (MORG) are a subset if the BMCPs files. Each household entering the CPS is administered 4 monthly interviews, then ignored for 8 months, then interviewed again for 4 months. Since 1979 only households in months 4 and 8 have been asked their usual weekly earnings and hours. These are the outgoing rotation groups. The BMCP includes all eight rotations and hence is four times larger than the MORGs. A consequence of this for earnings is that an individual appears only once in any file year but may reappear in the following year. Information about the MORGs may be obtained from the NBER at <http://www.nber.org/data/morg.html> with the data downloadable at <http://www.nber.org/morg/annual/>

Hispanic females, African-Americans and Hispanics from 1983-2008. Equivalent data are reported in [Table 27](#) for construction. Additional data are available for Asians/Pacific Islanders and Native Americans since 1992. Data are presented for total self-employment which we define here as the sum of incorporated and unincorporated: this is in contrast to the official definition of self-employment which only counts the number of unincorporated self-employed. There is no hours cut-off here and the sample includes both the agricultural and non-agricultural sectors which partly explains why the rates reported here are somewhat higher than those reported by Fairlie (2004) who reports non-agricultural rates with a smaller subset of these exact data.

The figures in the table are percentages so 7.1 in the top left of [Table 26](#) should be interpreted as, in 1983, 7.1% of employed non-Hispanic white females were self-employed, compared with 15.7% of non-Hispanic white males, 3.5% of African-Americans and 7.1% of Hispanics. The main findings from the tables are as follows.

- 1) The self-employment rate of non-Hispanic white males is markedly higher than is the case of any other group in all years.
- 2) Self-employment rates in construction are higher for all groups than the national average in all years.
- 3) Overall self-employment rates for white men, Native Americans and Asian/Pacific Islanders have fallen overall. Construction self-employment rates have increased for all groups.
- 4) The differential between the overall self-employment rates of white males and white females in construction has narrowed over time. The narrowing is more apparent than is found for 'all industries'.
- 5) The differential between the overall self-employment rates in construction of white males and blacks has not narrowed over time: indeed it has widened slightly.
- 6) Of particular note is that self-employment rates of blacks and Hispanics in construction rose during the 1980s and then declined after the *Croson* decision through the 1990s ([Table 27](#)). These trends are not apparent in the aggregate self-employment data in [Table 26](#). They then started to rise again after the *Concrete Works*, *BAGC*, *Gross Seed* and *Sherbrooke Turf* cases that were decided since 2000. For example, self-employment rates for African-Americans rose from 10.0% in 1983 to 17.3% in 1991, fell to 12.1% in 2002 and then rose to 23.7% in 2008. For Hispanics self-employment rates rose from 11.1% in 1983 rose to 15.6% in 1993, fell to 9.4% in 2002 and then rose to 15.8% in 2008. In contrast rates for white women rose during the 1980s from 13.1% in 1983 to a high of 28.9% in 1994 but then declined to 22.9% in 2000 and have been roughly steady since that time. This flattening coincides with concerns that firms owned by

white women were fronts for white men, which have resulted in public authorities being increasingly cautious in their certification processes.

There is a growing body of econometric research that has examined the probability that a randomly sampled worker is self-employed, holding constant their characteristics, especially their location, age and schooling (see Blanchflower 2000, 2004 and Blanchflower and Shadforth, 2007 for summaries). Some of this research has also looked at the probability that workers will move into or out of self-employment and the likely reasons for this. The main results from this work are as follows. Self-employment is higher among men than women; among older workers than younger workers; and is particularly high in construction and retailing. It is also especially high among some immigrant groups such as Koreans and Laotians; it does vary by region and state being especially high in construction occupations, agriculture and retailing. The self-employed are generally happier and more satisfied with their jobs than is the case for employees, in part perhaps as they do not need to commute and have much more control over their lives (Blanchflower, and Oswald 2004). They are also work longer hours (Blanchflower, 2004). There is also evidence that capital constraints bind and when lifted self-employment rises (Blanchflower and Oswald, 1998). There is little evidence to show that countries with higher self-employment rates do better than those with lower rates (Blanchflower and Shadforth, 2007). High proportions of employees say they would like to be self-employed (Blanchflower, Oswald and Stutzer, 2001). The distribution of self-employment earnings is generally greater than it is for wages and salaries – that is to say it has longer tails at both ends of the distribution (Blanchflower and Shadforth, 2007).

**Table 28** reports econometric evidence using the BMCPS from estimating the probability of an individual being self-employed, holding constant their characteristics such as their education, age, race, ethnicity, gender, industry and location. **Table 29** reports equivalent results for construction. The tables report the coefficients from a series of dprobits estimated in STATA, where the dependent variable is set to one if currently self-employed and zero if an employee, with the sample thus restricted to workers.<sup>54</sup> Controls include education, age and its square and state. The results from forty-eight separate equations are reported, one for each of the twenty four years and separately for all industries (part A) and construction (part B). In total there are nearly fourteen million observations, of which approximately one million are in construction. The probability of being self-employed in the US rises with age, is higher for men than for women and for married people than for the unmarried, rises with education; is highest in construction, is lower among minorities but higher among migrants and is especially high in Montana and lowest in Delaware.<sup>55</sup>

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<sup>54</sup> The *dprobit* procedure in STATA fits maximum-likelihood probit models and is an alternative to probit. Rather than reporting the coefficients, dprobit reports the marginal effect, that is the change in the probability for an infinitesimal change in each independent, continuous variable and, by default, reports the discrete change in the probability for dummy variables.

<sup>55</sup> Example equations estimating the probability of being self-employed (dprobits) from the most recently available data for 2008 for the US private sector and for private construction using data from the *Outgoing Rotation Group files of the CPS* are reported in Data Appendix 2.

All coefficients in **Tables 28 and 29** are highly significant, often with t-statistics above 50 for all industries.<sup>56</sup> The conclusions are similar to those obtained from the means reported in **Table 26** and **Table 27**

- 1) The probability of being self-employed, *ceteris paribus*, is higher for white males than for other groups, with this gap most apparent in construction.
- 2) In construction, the gap between white females, Asians, blacks and white males has narrowed markedly over time.
- 3) The gap between white males and Hispanics had changed little over time but narrowed markedly in 2008 in construction.
- 4) In construction the regression adjusted gap between white men and African Americans has narrowed appreciably recently – from 10.9% in 2002 to 6.8% in 2006.

### *Chicago*

Of interest also is how self-employment in Chicago in general and Chicago construction in particular compares to the national results presented above. **Table 30** illustrates, presenting various other distributions by race in Chicago as a whole as well as for Chicago construction compared to the national equivalents. The national estimates are in parentheses below each estimate. The first row of the table presents distributions by race across all workers – employees and self-employed – in Chicago: 29% of the workers are white female, 33% are white men, 15% are black, 7% are Asian, 16% are Hispanic and 1% are other.

The second row presents the distribution across of the self-employed in Chicago. The percent of white females is below that in row 1 for all Chicago workers. Still, representation of blacks and Hispanics in particular is low, accounting for only 8% and 7% of total self-employed, respectively.

Row 3 presents a distribution of the construction workforce – employees and self-employed. White women account for 9%, compared with 58% for white males; 7% are black; 1% are Asian; 24% are Hispanic and 2% are other. The share of white is higher than in row 3 for Chicago as a whole. Chicago construction workers are predominantly white men.

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<sup>56</sup> For example, for 2006 the coefficients and t-statistics in parentheses were as follows - white female -.037 (51.92); African-American -.060 (54.46); Native American -.044 (15.41); Asian/Pacific Islander -.020 (13.82) and Hispanic -.044 (40.23). In construction for 2006 the results were: white females -.065 (11.94); blacks -.0718 (9.59); Native Americans -.109 (7.81); Asian/Pacific Islanders -.084 (7.31) and Hispanics -.105 (20.87).

Row 4 presents the mix of the self-employed in Chicago construction. Over 77% are white men: the representation of Hispanics is especially low at 6% than it is in the overall construction workforce of 23.5% in row 3. It is perhaps to be expected that the proportion of the self-employed accounted for by white women would be lower than in the workforce as a whole, given their greater concentration in white collar occupations such as secretaries and bookkeepers. It is unclear why the proportion of the self-employed that are Hispanic is so low. Asians constitute 6% of total employment in Chicago and 7% of total self-employment but only 1% of the construction workforce. Slightly under one third of Asians employed in Chicago construction were self-employed.

Row 5 shows that the self-employment rate – defined as the proportion of workers (employees plus self-employed) who are self-employed - of white males in Chicago is approximately three times that of both blacks and Hispanics. Self-employment rates in construction in row 5 are generally higher than for other sectors, with the major exception of agriculture.<sup>57</sup> Self-employment rates of Hispanics seem especially low in Chicago construction.

Row 6 gives self-employment rates in Chicago construction which are especially low for Hispanics (5.6%) followed by blacks (10.9%).

Row 7 shows that blacks account for one in seven workers in Chicago but for one in three of the unemployed.

**Table 31** shows the distribution by race and gender of the self-employed by all industries and in construction, the distribution of employees in construction and the distribution in the Chicago population ages 18-70 for 1980, 1990, 2000 and 2007 and 2008 pooled. The data for 1980-2000 are from the 5% PUMS micro data files available from the Census Bureau (<http://www.census.gov/main/www/cen2000.html>). The data for 2007 and 2008 are from the BMCPS.

It is clear that the representation of minorities rose rapidly both in the employed population, up to 2000 but since then their share has declined. In contrast their share in construction - both in the share of employees and the self-employed has increased over time. As a proportion of the self-employed in construction minorities are up from 9% in 1980 to 23% in 2007/8.

My conclusions from the evidence presented here on the Chicago labor market are as follows.

- a) The proportion of the population that is white has declined both in Illinois in general and in Chicago and its surrounding counties in particular.
- b) There has been a rapid growth in Chicago in the size of the Hispanic population.

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<sup>57</sup> See Blanchflower (2004a).

- c) Minorities are relatively slow to set-up firms. Construction firms in Chicago are still primarily owned by white males.
- d) Minorities and women are an increasing proportion of the Chicago construction workforce.
- e) A higher proportion of the self-employed in Chicago construction are women and minorities than was true in the past.
- f) The proportion of the self-employed in Chicago construction who are women or minorities is considerably higher than is their share in the ownership of *firms*.

The question then is what determines the probability of an individual being self-employed, conditional on their characteristics? **Table 32** reports the results of estimating a series of self-employment probit equations, for Chicago and Chicago construction separately, using the 5% samples of the 1980, 1990 and 2000 Censuses, taken from Blanchflower (2005). The advantage of using the Census data is that there are adequate sample sizes even when examining Chicago first and then Chicago construction. Here, the dependent variable is set to one if self-employed and zero if the worker is an employee in the main activity. This is equivalent to modeling the probability of an individual being self-employed, conditional on the various characteristics being controlled for in the regression. Comparable equations are estimated for 1980, 1990 and 2000 using the last three Censuses. Each equation also includes as control variables age and its square, a gender dummy and 15 schooling dummies. The top part of the table reports results for the six-county area for all industries while the lower part reports construction only. The main findings are that minorities and women continue to have significantly lower self-employment probabilities in Chicago, holding constant their characteristics, than if they were white males with identical characteristics. The size of these effects diminished from 1980 to 1990 for blacks but increased for Hispanics,

**Table 33** and **Table 34** provide confirming evidence on the fact that, *ceteris paribus*, that is all other things remaining equal, self-employment rates are lower for minorities and white women, in construction and nationally, from two other data sources: the *2000 Census* and the *2007 American Community Survey* respectively, which both report information relating to the main activity in the year prior to interview. Details regarding the 2007 American Community Survey and the data are available from the Census Bureau at (<http://www.census.gov/acs/www/>).

In both of these tables we test for differences by gender and race by making use of interaction terms rather than running separate equations as in **Table 32**. Doing so this way means we have larger sample sizes and the t-statistic on the interaction coefficient is a test if the coefficient is statistically significant from that of white males, the excluded category.



There are nearly eight million data points in [Table 33](#) and nearly one and a half million data points in [Table 34](#). Each table has the same format with all industry equations in columns 1 and for construction in column 4. Controls are as in [Table 32](#) – age and its square, state of residence and schooling. Estimated results are very similar the two tables. There is some increase in the absolute size of the coefficients for white females and Hispanics between 2000 and 2007 in construction. The results for Chicago are the same as the national results for construction as the interaction terms are everywhere insignificant in 2007, whereas in 2000 probabilities were significantly lower for white female and higher for Hispanics.

[Table 35](#) explores further the extent of these regression adjusted differences using the much larger pooled data for 2004-2008 from the BMCPs micro data files. The idea here is to determine if the results for the United States also apply to Chicago. I do so by first estimating an overall equation for the USA in column 1 and then adding interaction terms between Chicago and the race and gender variables in column 2. I repeat for construction in columns 3 and 4. A significant coefficient suggests that there is a difference and vice versa if insignificant with the sign showing the direction of the difference. Standard errors are clustered at the household level because of the fact that there are up to eight repeat observations per individual. We find evidence in column 3 that self-employment probabilities are significantly *lower* for Hispanics and significantly *higher* for Native Americans in Chicago than nationally. In construction all of the interaction terms are insignificant. In column 5 we estimate a separate equation for Chicago construction and find that there are substantially larger (negative) differentials for blacks and Hispanics than is found nationally in construction.

To conclude then, it is apparent that there are significant - and large - differences by race and gender in the probability that a randomly selected construction worker will be self-employed in Chicago.

## **7. Self-employment Earnings and Wages**

It is also appropriate to consider not only the incidence of self-employment but also the earnings of the self-employed. Data on self-employment earnings are unavailable in the *BMCPs*, or the *MORG* files of the CPS but are available in the March surveys of the CPS known as the *Annual Demographic Supplement*. This file also contains the basic monthly demographic and labor force data relating to employment, earnings, and income and refer to the preceding year, although demographic data refer to the time of the survey. Data and documentation are also available from the NBER (<http://www.nber.org/data/current-population-survey-data.html>), the Census Bureau and Unicon Research Corporation.

Sample sizes are much lower than previously with around 194,000 observations per annum. Information on self-employed earnings is available for approximately 6,000 cases per annum. I pool together a number of years to ensure adequate sample sizes. Self-employed earnings relate to the preceding year, so 2001 earnings are derived from the 2002 survey. I also supplement this information for construction with data on annual earnings in the year preceding interview from the *2000 Census* and the *2006 ACS*. Individuals who report zero or negative self-employment are excluded and thus the

sample coverage is any individual who reported positive self-employment earnings in the preceding year collected at tax time.

**Table 36** reports a series of log earnings equations from the 2000 and 1990 Censuses separately for Chicago and for Chicago construction. The dependent variable is the log of (positive) annual self-employment earnings in the first two columns and the log of the annual wage in the final two columns. Included in the equations are sets of interaction terms between the race variables and the construction dummy. The  $t$ -statistic on this variable is a test of whether the race effect is different in construction: a  $t$ -statistic less than 1.96 implies it is the same. A  $T$ -statistic on the interaction term that is greater than 1.96 in absolute terms implies an additional effect of that variable. For example in the case of blacks in the 2000 equation the coefficient on black is insignificant overall and  $-.564$  for the construction dummy implying black earnings are lower only in construction and not in other industries in Chicago.

- a) The wages of minority and female employees in 2000 were more than 20% lower than those of white males in construction, and these differences are greater than in the 'all industry' category in column 1.
- b) In comparison with 1990, the gap between white females and white males in construction narrowed in 2000, widened for Hispanics and remained roughly constant for blacks and Asians.
- c) The gap between the self-employment earnings of blacks and white females compared with white men was greater than in wages. The size of that differential has widened over time.
- d) There was no evidence that the self-employment earnings of Hispanics, Asians or other races in 2000 in construction were statistically significantly different from those of whites.

**Table 37** reports estimates of the log of annual self-employment earnings differentials between white females and minority groups and comparable white males. Columns 1 and 2 are for all industries for the periods 1978-1990 and 1991-2001 respectively. Columns 3 and 4 are for construction over the same periods while column 5 is for construction in 1999 and column 6 for construction in 2004. The dependent variable is the log of self-employment earnings, which deletes non-positive earnings, but makes interpretation easier. The sample then consists of any individual who reported positive self-employment earnings in the preceding year whether or not they also reported wages. White females, blacks and other minority groups have significantly lower self-employment earnings than white males with similar personal characteristics. This is true in the private sector as a whole and in construction using both the March CPS files, the 2000 Census and the 2007 ACS. There is some evidence that the size of the coefficient for blacks has increased over time, suggesting further disadvantage.

**Table 38** provides data on the wages and union membership of employees in the United States and in construction using the MORG files of the CPS for the years 2006-2008. These are the only files that contain hourly wage data in the CPS and are a subset of the BMCPS. In all cases interaction terms are included between the various race dummies and a dummy for Chicago. Unions raise wages more in construction than in the US as a whole. Wages are significantly lower in Chicago than nationally for all minority groups except Asians. Union membership is significantly lower for Hispanics in construction.

It is apparent that there remain considerable disparities in the self-employment rates and earnings of white males and minorities and women. These differences are especially pronounced in construction. It appears that there was some improvement in the gap in self-employment rates between white men and blacks and Hispanics in particular during the 1980s and early 1990s when affirmative action programs were implemented by many public sector jurisdictions. Subsequent to the US Supreme Court decision in *Croson* in 1989 there was some widening again of this gap. As a result of a number of cases that occurred in the early 2000s that declared such programs constitutional, the gap has started to narrow once again.

### **8. Evidence on Liquidity constraints**

In work based on U.S. micro data at the level of the individual, Evans and Leighton (1989), and Evans and Jovanovic (1989), have argued formally that entrepreneurs face liquidity constraints. The authors use the *National Longitudinal Survey of Young Men* for 1966-1981, and the Current Population Surveys for 1968-1987. The key test shows that, all else remaining equal, people with greater family assets are more likely to switch to self-employment from employment. This asset variable enters probit equations significantly and with a quadratic form. Although Evans and his collaborators draw the conclusion that capital and liquidity constraints bind, this claim is open to the objection that other interpretations of their correlation are feasible. One possibility, for example, is that inherently acquisitive individuals both start their own businesses and forego leisure to build up family assets. In this case, there would be a correlation between family assets and movement into self-employment even if capital constraints did not exist. A second possibility is that the correlation between family assets and the movement to self-employment arises because children tend to inherit family firms. Parker (2002) is one of the very few papers providing some much needed theoretical arguments on whether and why banks ration enterprises.

Blanchflower and Oswald (1998), find that the probability of self-employment depends positively upon whether the individual ever received an inheritance or gift. This emerges from British data, the National Child Development Study; a birth cohort of children born in March 1958 who have been followed for the whole of their lives. Second, when directly questioned in interview surveys, potential entrepreneurs say that raising capital is their principal problem. Third, the self-employed report higher levels of job and life satisfaction than employees. Fourth, psychological test scores play only a small role. Work by Holtz-Eakin, Joulfaian and Rosen (1994a, 1994b), drew similar conclusions using different methods on U.S. data.

Hurst and Lusardi's paper (2004) – henceforth HL – reports some empirical patterns that challenge the conclusions reached by previous literature. Although the authors write that their findings should not be interpreted as complete lack of liquidity constraints, this seems to be the conclusion that many draw from their paper. Several papers have since raised doubts about both the HL findings and their interpretation. One of the HL pieces of evidence is that the entry probability into entrepreneurship as a function of wealth is rather flat apart from at the top of the wealth distribution – above the 95th percentile. Among several works challenging the interpretation that HL's results imply slack borrowing constraints, Fairlie and Krashinsky (2004) (FK) show that bifurcating the same PSID sample into workers who enter self-employment after job loss and those who do not, reveals steadily increasing entry rates as assets increase in both sub-samples. They argue that these two groups merit a separate analysis, because the two groups face different incentives, and thus have different solutions to the entrepreneurial decision (a point similar to the one made by Cagetti and De Nardi (2006) in the context of a structural model of entrepreneurship).

Another piece of evidence put forward by HL was that housing appreciation did not seem to increase entry into entrepreneurship. FK cast doubt on this finding using micro-data from matched Current Population Surveys (1993-2004). In their data set housing appreciation measured at the MSA-level indicates that a 10 percent annual increase in housing equity increases the mean probability of entrepreneurship by roughly 20 percent and that the effect is not concentrated at the upper tail of the distribution. Fairlie and Krashinsky's (2004) findings on the relationship between housing appreciation and entrepreneurship are consistent with the liquidity constraint hypothesis. Blanchflower and Shadforth (2007) showed that rising house prices, which freed up capital constraints, explain half of the recent increase in self-employment in the UK. This is consistent with Black et al (1996), for example, who found that a 10% rise in the value of unreleased net housing equity increases the number of new firm (VAT) registrations by some 5%. Cowling and Mitchell (1997) estimate that in the UK a 10% rise in housing wealth increased the proportion of the workforce in self-employment by 3%.

Quadrini (2008) also points out that even in the case in which borrowing constraints have little effect on entry (because the entrepreneur starts the firm at a smaller than optimal size) they could still have a very large effect on firm growth and survival. In an interesting new paper Nykvist (2008) examined whether potential entrepreneurs face liquidity constraints using similar methods to HL on Swedish data. Nykvist concludes that liquidity constraints *do* play a significant role when determining transition into entrepreneurship in Sweden. Magri (2008) studies similar questions for Italy, and also found that liquidity constraints affect entrepreneurial entry in Italy.

Using matched CPS Annual Demographic Files data from 1998 to 2003, Fairlie (2006) finds that the largest single factor explaining racial disparities in business-creation rates are differences in asset levels. Lower levels of assets among blacks account for 15.5 percent of the difference between the rates of business creation among whites and blacks. This finding is consistent with the presence of liquidity constraints and low levels of assets limiting opportunities for blacks to start businesses. The finding is very similar to

estimates reported in Fairlie (1999) for men using the Panel Study of Income Dynamics (PSID). Estimates from the PSID indicate that 13.9 to 15.2 percent of the black/white gap in business start rates can be explained by differences in assets.

Coleman and Robb (2008) used data from the Kauffman Firm Surveys (KFS) to examine gender differences in the use of start-up and follow-on capital by new firms. The KFS is a survey of new businesses in the United States. This survey collected information on 4,928 firms that started in 2004 and surveys them annually. This cohort is the first large national sample of firm startups that will be tracked over time. These data contain detailed information on both the firm and up to ten business owners per firm. In addition to the 2004 baseline year data, there are two years of follow up data (2005 and 2006). Their findings revealed that women rely heavily on personal rather than external sources of debt and equity. Further, they demonstrated that women start their firms with significantly lower amounts of capital than men. Finally, women went on to raise significantly lower amounts of incremental debt and equity in years two and three even controlling for a variety of firm and owner characteristics including the level of initial start-up capital and firm sales. The authors did not explicitly separate out white women and the difficulty in interpreting their results is that it likely conflates gender and race effects together.

Broussard *et al* (2003) found that the self-employed in the USA have between .2 and .4 more children compared to the non-self-employed. The authors argue that having more children can increase the likelihood that an inside family member will be a good match at running the business. One might also think that the existence of family businesses, which are particularly prevalent in construction, is a further way to overcome the existence of capital constraints. Transfers of firms within families will help to preserve the status quo and will work against the interests of minorities in general and blacks in particular who do not have as strong a history of business ownership as indigenous whites. Analogously, Hout and Rosen (2000) found that the offspring of self-employed fathers are more likely than others to become self-employed and argued that the historically low rates of self-employment among African-Americans and Latinos may contribute to their low contemporary rates.

Blanchflower, Oswald and Stutzer (2001) found that there is a strikingly large latent desire to be in charge of one's own business. There exists frustrated entrepreneurship on a huge scale in the U.S. and other OECD countries. In the U.S., seven out of ten people say they would prefer to be self-employed. This compares to an actual proportion of self-employed people in 2001 of 7.3 percent of the civilian labor force, which also shows that the proportion of the labor force that is self-employed has declined steadily since 1990 following a small increase in the rate from 1980 to 1990 (Fairlie and Meyer, 2000).<sup>58</sup> This raises an important puzzle. Why do so few individuals in the U.S. and OECD

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<sup>58</sup> Fairlie and Meyer (2000) documented the fact that the self-employment rate for white men fell from 1910 to 1970 but then increased until 1990. That trend has continued to fall thereafter according to Table 2 post 1993.

manage to translate their preferences into action? Lack of start-up capital is one likely explanation. A further issue is whether lack of liquidity helps to explain the large racial differences in self-employment. We provide evidence on this below.

One important impediment to *minority entrepreneurship* is lack of capital. As noted by Nobel Laureate Kenneth Arrow.

"Racial discrimination pervades every aspect of a society in which it is found. It is found above all in attitudes of both races, but also in social relations, in intermarriage, in residential location, and frequently in legal barriers. It is also found in levels of economic accomplishment; that is income, wages, prices paid, *and credit extended*" (1998, p.91 italics added)

In a number of early papers Bates (1991, 1997, 1999) found evidence that minority and women-owned firms face discrimination in loan approval. These firms are younger and smaller than white- and male-owned firms, however, and may be more susceptible to swings in market conditions (Bates, 1999).

Blanchflower, Levine and Zimmerman (2003) examined the availability of credit to minority and female-owned small businesses using data from the 1993 and 1998 National Surveys of Small Business Finances conducted by the Reserve Board of Governors. They demonstrated that loan denial probabilities for African-American owned firms were approximately double those for comparable white-owned firms in both sweeps of the survey. Even when African-Americans were able to obtain loans they had to pay higher interest rates. Comparable but smaller effects were found for Hispanics. These differences were not explained by differences in creditworthiness or other observables. Such differences disappeared when the use of credit cards was examined, where the banks were unaware of the race of the applicant. The authors found that firms owned by minorities are discriminated against in the credit market. Similar results were found by Cavalluzzo, Cavalluzzo and Wolken (2002).

Blanchard et al (2008) confirm the results found in Blanchflower, Levine and Zimmerman (2003) and also report statistically significant evidence of substantial discrimination in loan approval against black-owned and Hispanic-owned businesses using data from the 1993 and 1998 SSBF. They also found that black-owned businesses do face discrimination in interest rates when they borrow from finance companies and businesses, such as mutual fund companies and leasing companies, with a primary mission other than lending. The authors argue that their findings "suggest that federal financial regulatory agencies should re-double their efforts to uncover and prosecute lenders who discriminate against black- and Hispanic-owned businesses and that new tools may be needed to find discrimination by firms not well covered by the existing fair-lending enforcement system".

Coleman (2005) used data from the 1998 Survey of Small Business Finances to compare the borrowing experience of small firms owned by black men to those owned by white men. Coleman found that black firm owners were more dependent on loans from non-

bank sources than white owners. Black men were significantly more likely to have been turned down for their most recent loan and were more likely to be discouraged from applying for loans. Results also reveal that black men were more likely to be turned down for *trade credit*.

In a study conducted for the SBA Office of Advocacy, Mitchell and Pearce (2005) conformed the findings in Blanchflower, Levine and Zimmerman (2003) using data from the 1998 SSBF. Mitchell and Pearce found that **African-American and Hispanic firm were discriminated against but found no evidence for this for female- or Asian-led firms. Coleman, (2002, 2003) estimated loan denial models for African-American and Hispanic firm owners using the 1998 SSBF and found they are more likely to be denied loans by all types of lenders, but especially commercial banks.**

Craig et al (2007) empirically tested whether Small Business Administration (SBA) guaranteed lending has a greater impact on economic performance in markets with a high percentage of potential minority small businesses. This hypothesis is based on the assumptions that (1) credit rationing is more likely to occur in markets with a higher percentage of minority small businesses; and (2) SBA guaranteed lending is likely to reduce these credit rationing problems, thus improving economic performance in the local market. Using local market employment rates as the measure of economic performance, the authors find a positive and significant impact of SBA guaranteed lending on the average employment rate in a local market. And, this impact is 200 percent larger in markets with a high percentage of potential minority small businesses.

A recent study published by the U.S. Chamber of Commerce (2005) also confirms the findings in Blanchflower, Levine and Zimmerman (2003) and Blanchflower (2009) and our above results. The survey was conducted in March and April 2005 and detailed the financing problems experienced by small business owners, 95% of whom had less than 100 employees: 1080 business owners were interviewed and reported that minority businesses rely heavily on credit cards to fund their businesses, often do not apply for credit, even though they need it, for fear of being denied and were especially likely to need working capital. In particular they report that availability of credit is their top problem, exactly as reported by Blanchflower et al (2003). The biggest difference in responses between minorities and Caucasian men and women was availability of credit: 19% of Caucasian males report credit as their top problem compared with 54% for minority males – a 35 percentage point difference. There was a 15 percentage point difference for women. In no other category is there more than a 10 percentage point difference for men or women.

Access to capital is often cited as a problem for women business owners, and a recent study by Lee and Denslow (2004) noted that it is more of a problem during the early stages of a firm's development. In a study of over 1,000 Canadian firms, Orser et al. (2000) reported that women were more concerned about access to capital than with any other business problem. A number of studies have also noted that women tend to perform worse relative to men-owned firms on a variety of measures such as size, growth, and profits (Fairlie and Robb, 2008). Fairlie and Robb (2009) find that female-

owned businesses are less successful than male-owned businesses because they have less startup capital, less business human capital acquired through prior work experience in a similar business, and less prior work experience in a family business.

Robb, Fairlie and Robinson (2008), examined data from the Kaufman Firm Survey and found that black-owned businesses faced

"persistent difficulty in accessing external capital markets. Black-owned businesses are significantly less likely to access external debt or equity in their first year of funding. This results in significantly lower levels of initial financial capital. The initial black/white funding deficit, however, is not overcome through later stage capital injections. In the years following startup, black-owned businesses rely more on additional equity funding from owners, and show persistence in their lack of external funding".

**Table 39** is taken from Coleman and Robb (2009) and reveals that women used dramatically lower amounts of total capital, debt, and equity to start their firms than men. Mean amounts of start-up capital in the baseline year (2004) were \$54,375 for women compared with \$80,285 for men. The differences are even more dramatic when we look at external sources of capital. Men used more than twice as much business debt to establish their firms as women (\$21,885 vs. \$9,312), while women were more reliant on owner or personal debt. Similarly, men used almost three times the amount of external equity as women (\$11,224 vs. \$3,196). A similar pattern persists in the follow-on years of 2005 and 2006. In both years, women raised roughly half of the amount of incremental financing that men did. The discrepancies are even more extreme when we consider the categories of business debt and external equity where the amount of new capital raised by women was closer to one-third of that raised by men. To summarize, for the first three years of operation, women-owned firms raised an average of approximately \$120,000 compared to more than \$200,000 for firms owned by men. Similarly women raised a total of \$25,000 of business debt and \$8,000 of external equity, compared with \$64,000 in business debt and \$26,000 of external equity for men.

**Table 40** makes use of data from the 2003 Survey of Small Business Finances, once again conducted by the Reserve Board of Governors.<sup>59</sup> The table reports the results of asking business owners for the most important problem experienced by the firm.<sup>60</sup> Consistent

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<sup>59</sup> To download the data and find survey details and documentation go to [www.federalreserve.gov/pubs/oss/oss3/nssbftoc.htm](http://www.federalreserve.gov/pubs/oss/oss3/nssbftoc.htm)

<sup>60</sup> The data file provided by the Board of Governors includes five separate observations per firm. That is to say there are 4240\*5=21,200 observations. These so-called multiple imputations done via a randomized regression model, are included because where there are missing observations several alternative estimates are provided. Where values are not missing the values for each of the five imputations are identical. We make use of the data from the first imputation: the results presented here are essentially identical whichever of the imputation are used. Overall only 1.8% of observations in the data file were missing.



with the results reported above, firms owned by minorities were especially likely to say that their most important problem was 'financing and interest rates'. One in twenty white owners reported this as their major problem compared to one in five black owners. One in ten Asian owners gave this as their most important reason. I then estimated a series of dprobits with the dependent variable set to one if the respondent reported a problem with financing, and interest rates, zero otherwise. I experimented with a variety of specifications including controls as in Table 41 and in all cases the black coefficient was statistically significant and large, typically approximately .07 with a T-statistic of around 3.5. The Asian coefficient in all cases was positive but was generally on the borders of significance at the 10% level on a one-tailed test once controls were added.

**Table 41** updates the analysis in Blanchflower et al (2003) also using data from the 2003 Survey of Small Business Finances (SSBF). It extend further work done in Blanchflower (2009) also using the 2003 SSBF. For a summary of the main characteristics of firms in the 2003 SSBF see Board of Governors (2007). The number and proportion of firms held by women and minorities in the 1998 and 2003 SSBFs as reported by the Board of Governors (2007, Table A.10 is as follows.

|                                  | Number | 2003 | 1998 |
|----------------------------------|--------|------|------|
| Nonwhite or Hispanic             | 484    | 13.0 | 14.6 |
| Non-Hispanic white,              | 697    | 86.4 | 85.4 |
| White                            | 3,853  | 90.7 | 90.5 |
| Black                            | 119    | 3.7  | 4.2  |
| Asian or Pacific Islander        | 170    | 4.2  | 4.5  |
| American Indian or Alaska Native | 58     | 1.3  | .8   |
| Hispanic                         | 149    | 4.1  | 5.6  |
| Non-Hispanic                     | 4,032  | 95.6 | 94.4 |
| Female                           | 783    | 22.3 | 24.3 |
| Male                             | 2,923  | 64.6 | 72.0 |
| Ownership equally divided by sex | 475    | 12.8 | 3.7  |

It is noticeable that the proportions of firms owned by females, blacks and Hispanics has fallen over time.

The dependent variable in **Table 41** which uses the 2003 SSBF data is whether or not a loan was denied. As in earlier sweeps there was considerable variation by race and gender. The weighted means were as follows. Denial rates for firms owned by blacks are nearly six times higher than for firms owned by white males.

|               | % denied | N    |
|---------------|----------|------|
| White males   | 11.8     | 1460 |
| White females | 14.8     | 209  |
| Blacks        | 68.3     | 47   |
| Asian         | 18.0     | 61   |
| Hispanic      | 15.4     | 55   |
| Other races   | 37.5     | 22   |

Total 14.8 1854

As we move across the table control variable are added. There is consistent evidence that black-owned firms are discriminated in the credit market even after their characteristics, including their creditworthiness which in itself is likely impacted by discrimination, are controlled for. The effects for blacks are very similar to those reported by Blanchflower et al (2003) for both 1993 and 1998 – there has been no improvement at all over time for blacks.<sup>61</sup> The coefficient for Hispanics is lower than for blacks but still substantial and more than double the probability a firm owned by a white male with the same characteristics would have a loan denied. *There is now evidence that Asians are discriminated against in the credit market.* The coefficient is close to significance at the 5% level on a one-tailed test. When interaction terms between construction and the race variables were included, they were statistically insignificant implying the results can be generalized to construction.

Interestingly, Weller (2007) also found evidence that black families were denied access to credit using data from the *Surveys of Consumer Finances*. Weller found that minority families, young families, and moderate-income families tend to have higher loan denial rates than their counterparts, and there is no clear sign that denial rates have declined over time. On the contrary, Weller reported, for almost all groups, loan denial rates were higher in 2004 than in 1989 and in 2001. His main results are reported below.

a) Applied, denied, and could not get full amount elsewhere

|          | <b>1989</b> | <b>1992</b> | <b>1995</b> | <b>1998</b> | <b>2001</b> | <b>2004</b> |
|----------|-------------|-------------|-------------|-------------|-------------|-------------|
| Total    | 11.6%       | 14.8%       | 12.1%       | 12.6%       | 12.3%       | 13.0%       |
| White    | 10.1%       | 12.4%       | 10.3%       | 11.5%       | 10.8%       | 10.8%       |
| Black    | 13.0%       | 25.4%       | 20.2%       | 20.0%       | 18.3%       | 22.0%       |
| Hispanic | 20.6%       | 21.6%       | 17.0%       | 13.9%       | 16.1%       | 18.1%       |

b) Did not apply because of fear of being turned down

|          | <b>1989</b> | <b>1992</b> | <b>1995</b> | <b>1998</b> | <b>2001</b> | <b>2004</b> |
|----------|-------------|-------------|-------------|-------------|-------------|-------------|
| Total    | 5.5%        | 5.3%        | 8.3%        | 6.7%        | 7.0%        | 6.9%        |
| White    | 3.4%        | 3.7%        | 5.7%        | 4.4%        | 4.1%        | 4.9%        |
| Black    | 13.5%       | 8.6%        | 21.3%       | 15.2%       | 16.6%       | 14.9%       |
| Hispanic | 10.5%       | 14.6%       | 13.8%       | 17.3%       | 16.5%       | 11.9%       |

The SCF asks families if they thought about applying for a loan in the previous five years but did not do so because they thought they would be turned down. Minorities were substantially more likely to feel discouraged from applying than whites. Blanchflower,

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<sup>61</sup> With full sets of controls the coefficients for 1993 and 1998 for blacks were .23 and .31 and for Hispanics .03 and .22 respectively. They were not significant for other groups. Source Blanchflower et al (2003) Table 3.

Levine and Zimmerman (2003) found a similar result for minority-owned firms who were discouraged from applying for fear of being denied.

**Table 42** reports the results of estimating a dprobit where the dependent variable is whether a business credit card is used to pay business expenses. As noted in Blanchflower, Levine and Zimmerman (2003) the application procedure for a business credit card is usually automated and the bank doesn't know the race of the applicant. If there were missing variables such as creditworthiness or some such characteristic unobserved to the econometrician the race variables should enter significantly in this equation. The proportion of firms with such cards is reported below – blacks and white females have a lower prevalence.

|               | % with card | N    |
|---------------|-------------|------|
| White males   | 49.7        | 3014 |
| White females | 43.2        | 670  |
| Blacks        | 36.0        | 117  |
| Asian         | 53.7        | 171  |
| Hispanic      | 51.5        | 135  |
| Other races   | 46.6        | 74   |
| Total         | 48.1        | 4181 |

In **Table 42** there are significant coefficients in columns 1 and 2 for both blacks and white women. However, once suitable controls are included this result disappears. As in the denial equations interactions between race and the construction dummy were insignificant. The evidence on credit cards is of particular importance given that it is race, but not gender, blind. This is a nice 'natural experiment'. We would expect there to be differences in the availability of credit cards, credit balances etc between whites and blacks, for example, if there were remaining *unobserved* factors other than race. This suggests that there is potentially a more able pool of black applicants than white applicants out there. It remains unclear, for reasons discussed by Blanchflower et al (2003) whether this implies higher or lower default rates, especially if the distribution of loan repayment probabilities is different.

**Table 43** models the interest rate charged for those minority and female-owned firms who were able to successfully obtain a loan. As was found in earlier surveys, blacks are hit by a 'double whammy' in that they then have to pay one percentage higher rate on their loan than would firms owned by white males with identical characteristics. Hispanics have to pay one and a half percentage points higher. Asians pay half a point higher.

Cole (2008) also makes use of the 2003 *Survey of Small Business Finances* and confirms the finding in Blanchflower, Levine and Zimmerman (2003) and Blanchflower (2009) that blacks have higher denial rates and pay higher interest rates. Cole classified small businesses into four groups based upon their credit needs and to model the credit allocation process into a sequence of three steps. First, do firms need credit? Those that do not are classified as “non-borrowers,” and have received scant attention in the

literature even though they account for more than half of all small firms. Second, do firms need credit but fail to apply because they feared being turned down? He classified such firms as “discouraged borrowers.” Like non-borrowers, discouraged borrowers have received little attention in the literature and often are pooled with firms who applied for but were denied credit. Discouraged borrowers account for more than twice the number of small firms as do firms that applied for but were denied credit. Third, do firms apply for credit but get turned down? We classify such firms as “denied borrowers” while we classify firms that applied for and were extended credit as “approved borrowers.” Cole's results reveal significant differences among each of these four groups of firms. Non-borrowers look very much like approved borrowers. Discouraged borrowers resemble Denied borrowers in many respects but are significantly different along a number of dimensions. Finally, Cole found strong evidence that Black-owned firms were denied credit at a far higher rate than firms with owners who were White, Asian or Hispanic.

Coleman (2008) also examined data from the 2003 Survey of Small Business Finances. Results reveal that black-owned firms were no less likely to have loans than white-owned firms controlling for firm and owner characteristics. Nevertheless, black-owned firms were still significantly more likely to be turned down for loans and more likely to refrain from applying because they assumed they would be turned down. Further, black firm owners who were approved for loans paid significantly higher rates of interest.

#### *City of Chicago Survey of Discrimination in the Local Credit market*

In order to determine whether there was discrimination in the credit market for small businesses in Chicago the City commissioned Metro Chicago Information Center (MCIC) to perform a survey. We provided the questionnaire to be used to be consistent with that used in the 2003 SSBF which is produced as Exhibit B. We also provided MCIC with a list of construction firms in the Chicago area provided by Dunn and Bradstreet used in our availability analysis later in this report. The sample used was weighted to ensure representation of firms owned by women and minorities and was selected at random. This was done by generating a set of random numbers. Each firm therefore has additional information from the D&B database including their D&B number for cross-reference. The exceptions are certified MWBEs/DBEs we added to the master file of firms from a variety of sources including the City of Chicago; the State of Illinois; Cook County; Chicago METRA and other trade organisations.

Responses were received from 400 firms of which 248 were owned by white males. Of the remainder 32 firms were owned by African Americans; 41 by Hispanics; 10 by Asian/Pacific Islanders; 7 by Native Americans and 62 by white females. In total 86 firms were majority owned by women. Hence, 22.5% were MBEs, 21.5% WBEs and 38% MWBEs. Here ownership is defined on control of at least 51% of the firm. Overall 61 certified MWBEs, 31 certified DBEs and 31 certified WBEs are included in the database. Of these, 50 were certified by the City of Chicago; 48 by the State of Illinois and 27 by Cook County.

Firms were distributed across sectors as follows, with the proportions of firms owned by MWBEs in the second column.

|                               |            |            |
|-------------------------------|------------|------------|
| Building construction         | 122        | 18%        |
| Heavy construction            | 20         | 60%        |
| Trade or subcontractors       | 159        | 40%        |
| A/E services                  | 10         | 70%        |
| Construction-related services | 19         | 63%        |
| Maintenance services          | 21         | 52%        |
| Information technology        | 7          | 57%        |
| Commodities                   | 4          | 0%         |
| Other                         | 38         | 55%        |
| <b>Total</b>                  | <b>400</b> | <b>38%</b> |

It is apparent from the survey that firms had difficulty accessing credit. Bonding requirements also caused difficulties. Respondents were asked (Q31) whether "in the last five years, has this business been discriminated against on the basis of racial or ethnic heritage, or gender?". Responses were as follows

|                         |     |
|-------------------------|-----|
| African Americans       | 17% |
| Hispanics               | 7%  |
| Asian/Pacific Islanders | 0%  |
| Native Americans        | 14% |
| White females.          | 11% |
| Certified MWBEs         | 12% |

In addition respondents were asked (Q33). "Have any of the following bid requirements made it harder or impossible to obtain an award? a) Bonding requirements b) Obtaining working capital?" Responses are tabulated below. Minorities were especially likely to report difficulties with bonding and obtaining working capital.

|                         | Bonding requirements | Working capital |
|-------------------------|----------------------|-----------------|
| African Americans       | 55%                  | 63%             |
| Hispanics               | 30%                  | 37%             |
| Asian/Pacific Islanders | 13%                  | 33%             |
| Native Americans        | 14%                  | 57%             |
| White males             | 18%                  | 14%             |
| White females           | 31%                  | 15%             |
| Certified MWBEs         | 39%                  | 40%             |

Firm owners were also asked (Q15). *'What is the single most important problem facing this business today? (one only)'*. The proportion saying 'financing and interest rates' was as follows

|                         |     |
|-------------------------|-----|
| African Americans       | 34% |
| Hispanics               | 12% |
| Asian/Pacific Islanders | 20% |
| Native Americans        | 14% |

|                 |     |
|-----------------|-----|
| White males     | 4%  |
| White females   | 3%  |
| Certified MWBEs | 12% |

When a dprobit regression is run, with the dependent variable set to one if the respondent said the most important problem was financing and interest rates. The regressions reported below, with T-statistics in parentheses, show there is a significantly higher proportion of African Americans, Asians and Hispanics saying this. There was no significant difference between white males and white females or natives.

|                         |        |        |
|-------------------------|--------|--------|
| African Americans       | .3254  | (4.98) |
| Hispanics               | .0968  | (2.00) |
| Asian/Pacific Islanders | .1921  | (1.91) |
| Native Americans        | .1279  | 1.13)  |
| White females           | -.0114 | (0.30) |
| N                       | 400    |        |
| Pseudo R <sup>2</sup>   | .1342  |        |

It also turns out that certified MBEs and WBEs when asked if prime contractors who them as a subcontractor on public sector projects with MBE/WBE participation goals also used them on projects without such goals? (Q38). The responses saying they *were not used* were as follows.

|                               |     |
|-------------------------------|-----|
| African Americans (n=22)      | 59% |
| Hispanics (n=17)              | 35% |
| Asian/Pacific Islanders (n=4) | 50% |
| Native Americans (n=1)        | 0%  |
| White females (n=18)          | 56% |
| Overall (n=62)                | 50% |

This suggests that if participation goals were removed or lowered the utilization of MWBEs would likely fall sharply.

Data are also available on *denial rates*. Results from our Chicago survey are commensurate with those from the various SSBFs discussed above. Results are presented below. Approximately half of respondents applied for a loan in the preceding three years. Denial rates are much higher for minorities and, as usual, especially so for African Americans and low for whites.

|                         |       |
|-------------------------|-------|
| African Americans       | 47.4% |
| Hispanics               | 13.6% |
| Asian/Pacific Islanders | 16.7% |
| Native Americans        | 33.3% |
| White males             | 12.0% |
| White females           | 10.0% |
| Certified MWBEs         | 22.9% |
| Total                   | 15.5% |

In [Table 44](#) I estimate a dprobit with the dependent variable set to one if the loan was denied zero if it was not. Column 1 only includes race and gender controls. Column 2 also includes controls for number of employees, firm being delinquent past 60 days different business obligations, schooling and industry dummies. A number of other controls were also included but were insignificant and excluded (e.g. owner's age, owner's schooling, sales and firm age). This is unsurprising given the relatively small sample size. The probability of denial is significantly higher for African Americans than for white men. This is true with or without controls. There is no significant evidence for other minority groups or white women. This may well simply be due to small sample sizes so we pooled the Chicago data with the data from the 2003 SBF used in [Table 41](#). The insignificance of the Chicago dummy means that the data from the two surveys are not significantly different and the national results apply to Chicago. There are significant differences in denial probabilities for all races and white women in Chicago and elsewhere.

In addition, the City of Chicago commissioned further analysis of anecdotal evidence of Asian, Hispanic and African-American business owners. Separate reports prepared to summarize findings and conclusions drawn from the interviews of Asian, Hispanic, African American and white female business owners are attached hereto, and incorporated herein, as Group Exhibit C. These interviews with the participants in the market fully support the findings from the Chicago survey and the national data.

Lau (2009, Group Exhibit C) conducted in-depth interviews with 20 Asian Americans. She found that a significant majority had experienced discrimination in the last five years. These respondents reported that without the City's program they could not survive. Prime contractors did not hire them as a subcontractor on private sector projects despite using them on public sector projects with goals. They also reported of difficulties in obtaining bonding and working capital.

Aparicio (2009a, Group Exhibit C) interviewed seventeen Hispanic owners of construction firms in Chicago. Her main findings were that Hispanics have difficulties breaking into the "old boy's" network and dealing with problems of slow pay and the importance of public sector work. One quote from her report is particularly relevant.

"No firm that has approached me to partner with them in public sector work has done the same in the private sector.

In the public sector, GCs have to hire MBEs. But when they're in the private sector, they won't take MBEs.

In the private sector, ironically even if a prime contractor uses a sub on a public project, I've heard from some of our members that they don't get used in the private sector where there's not a 25 and 5 requirement [even with the same contractor]. So that's where it's incumbent that this ordinance stay in place because we see that in the private sector is always

doesn't translate to opportunities. They're not required. I think that because it's not required they don't reach out to those minority firms".

Aparicio (2008b, Group Exhibit C) also found evidence from a series of focus groups she undertook with white female owners of construction firms in Chicago, which included business owners with more than 20 years experience in the Chicago construction market, that women were discriminated against. The following quote is illustrative.

"Here's the deal with them. I talked with one of their guys one time, especially when I started the second company with the steel and everything -- and they have their own ironworkers and so I understand all that. And the guy told me, he says ma'am, he says I have never had a woman working on my job, he says, as long as I've been in business, he goes. And I'll close my doors before I ever have a woman contractor working for me."

Aparicio also found that white women had little opportunities to do to private sector work. They also reported having limited access to capital and having to pay higher interest rates than white men. A quote illustrates

"I feel like we're redlined when it comes to our access to capital also. We don't have the 100-year relationships typically. So parameters that are bestowed upon us or what we have to go through to achieve those or build those relationships with bankers, I think that we have to -- we have to go through a lot more. I think we are held to tighter covenants. I don't think we get the best rates on the interest rates when we are negotiating our loans or our lines of credit. So all of those types of vehicles, financial instruments, we typically don't have those type of benefits when we negotiate."

Herring and Henderson (2009, Group Exhibit C) interviewed 20 firms owned by African Americans in Chicago construction. They reported that, one overriding theme of the interviews was that while significant progress had been made in integrating minorities into Chicago's public and private sector contracting activities, many barriers remain. Perhaps the most subtle and difficult to address is that of negative perceptions and stereotypes. Despite perceived flaws in the program, African American contractors were, apparently unanimous in their belief that the suspension of the M/W/DBE would hurt their firms.

In terms of access to capital, roughly 80% of African American contractors stated that they found it difficult to acquire working capital. Most (about 65%) of African American contractors expressed frustration with trying to obtain public sector contracts as prime contractors. Herring and Henderson reported that this sentiment held true irrespective of industry, size of firm, and length of time in business. None said that they were successful on a regular basis in being awarded prime contracts, despite their strong desire to act as prime contractors or consultants. Still, many firms (about 30%) said that they vigorously



pursue work as prime contractors but find it nearly impossible to succeed because of the difficulty of satisfy insurance and bonding requirements.

Herring and Henderson found that African American-owned firms “had even less success in obtaining work on large-scale private sector projects. This was even the case when they were attempting to serve as subcontractors. They reported that prime contractors and consultants that had worked with them successfully on City and other projects with mandated affirmative action goals rarely or never solicited or hired them when it came to private work”. Even more, they believed that private projects were nearly impossible to access because they are so “networked” that they are out of the reach of minorities. There is a belief by some that “nepotism and cronyism are in play”.

Herring and Henderson (2009) conclude as follows.

“It is clear from the in-depth interviews that several African American contractors believe that they continue to encounter significant barriers to the success of their firms in seeking City and private sector work. In some cases, but not all, they believe these barriers are the result of discrimination. In other cases, they see barriers such as the everyday business environment. These everyday barriers include things such as bonding and insurance requirements. They also see racial barriers in their ability to do business in Chicago’s relevant markets. They also believe that racial stereotypes and low expectations about their competence limit the frequency with which their firms are used as subcontractors or suppliers by prime contractors on contracts, hired to work, and even how often they are solicited to bid when M/W/DBE goals are in place. But they believe such patterns are even worse when there are no M/W/DBE goals in place”.

**Based on both quantitative and qualitative evidence there appears to be discrimination in the small business credit market towards African Americans and Hispanics in particular and to white females and Asians to a lesser extent in Chicago construction**

#### *Conclusion*

It appears that minorities are being discriminated against in the credit markets: when race is known they are unable to obtain loans and when they do obtain them they have to pay higher interest rates than is true of comparable white males. When race is unknown there is no disadvantage. Discrimination in the credit market remains for minority owners of small firms. Minority-owned firms have their loans denied when they shouldn’t and have to pay higher rates of interest than appears appropriate given their characteristics.

There continue to be large disparities both in the incidence of self-employment and in the earnings obtained from it between white males and others. The differences are especially stark in construction despite the existence of a panoply of public sector procurement programs designed to improve the position of women and minorities. They were implemented at local, state and federal levels and have been subject to challenges in the courts. The US Supreme Court decision in the *Crosby* case in 1989, however, made it

very difficult to maintain such affirmative action programs and many were subsequently struck down by the courts. Where they did remain in existence many were watered down to the extent that many only had race-neutral components left. Since the turn of the millennium a number of cases have turned the tide in the other direction, with courts declaring a number of programs constitutional. Examples include cases relating to the City and County of Denver and the City of Chicago.

Overall, we have shown that there has been some deterioration over time in the relative position of African-Americans, white females and Asians compared to white males both nationally and in construction in the years after the Croson decision. Since the turn of the century, however, there has been some narrowing in the differentials in self-employment rates between white males and blacks and white females in construction. This appears to have been spurred by a number of court decisions – *Gross Seed; Sherbrooke Turf, Concrete Works: BAGC and Northern Paving* - finding both federal, state and local public procurement programs in construction to be constitutional. In contrast the probability of being self-employed for Hispanics compared to white males has not improved.

It is clear, however, that despite some narrowing over time between white men and other groups substantial disparities still remain, especially in construction. Raw self-employment rates of white men in construction in 2006 were 28% compared with 21% for white females, 17% for blacks and 13% for Hispanics. The gap between the earnings of white men and all groups other than Asians remains large. In a recent paper published by the Office of Advocacy, Ying Lowery (2007) reported on the patterns of income, including self-employment income using data from the 2005 Current Population Survey March Supplement, which provides data for the preceding year of 2004. The data are presented below.

|                     | Hispanic | White | Black | Native<br>American | Asian | Islander |
|---------------------|----------|-------|-------|--------------------|-------|----------|
| All labor force     |          |       |       |                    |       |          |
| <\$20,000           | 49       | 29    | 41    | 42                 | 29    | 34       |
| \$20,000-<\$40,000  | 36       | 32    | 40    | 36                 | 29    | 36       |
| \$40,000-<\$60,000  | 12       | 19    | 15    | 14                 | 19    | 18       |
| \$60,000-<\$80,000  | 4        | 10    | 6     | 6                  | 10    | 8        |
| \$80,000-<\$100,000 | 1        | 5     | 2     | 3                  | 6     | 4        |
| =\$100,000          | 2        | 7     | 3     | 2                  | 9     | 3        |
| Self-employed       |          |       |       |                    |       |          |
| <\$20,000           | 44       | 3     | 45    | 52                 | 22    | 31       |
| \$20,000-<\$40,000  | 25       | 25    | 27    | 28                 | 27    | 37       |
| \$40,000-<\$60,000  | 14       | 16    | 12    | 4                  | 19    | 11       |
| \$60,000-<\$80,000  | 7        | 10    | 6     | 10                 | 9     | 4        |
| \$80,000-<\$100,000 | 3        | 5     | 4     | 2                  | 4     | 5        |
| =\$100,000          | 6        | 13    | 6     | 4                  | 17    | 12       |

Lowery notes that

"Asians and Whites in the labor force were relatively more represented in the middle to higher levels of income, while Hispanics, Native Americans, and Blacks were more dominant in the lower to **middle income levels**. **For example, more than 85 percent of the Hispanic labor force had personal income under \$40,000 in 2004 compared with 60 percent of Asians and Whites. Self-employment tended to increase the share of each group in the top income level over \$100,000, but also increased the share in the bottom income level under \$20,000 for Whites, Blacks, and Native Americans.**" (2007, p.22)

Lowery (2007) also provides data from the same source showing that minorities are less likely than whites to have household dividend income, interest or rental income.<sup>62</sup>

|                                     | Hispanic | White | Black | Native<br>American | Asian | Islander |
|-------------------------------------|----------|-------|-------|--------------------|-------|----------|
| <b>a) Household dividend income</b> |          |       |       |                    |       |          |
| Total population                    | 8        | 33    | 10    | 11                 | 28    | 16       |
| Labor force                         | 10       | 35    | 13    | 13                 | 30    | 19       |
| Self-employed                       | 15       | 41    | 13    | 17                 | 32    | 35       |
| Professionals                       | 23       | 47    | 20    | 23                 | 40    | 38       |
| <b>b) Household interest income</b> |          |       |       |                    |       |          |
| Total population                    | 28       | 62    | 31    | 34                 | 54    | 43       |
| Labor force                         | 32       | 65    | 36    | 38                 | 57    | 49       |
| Self-employed                       | 42       | 69    | 39    | 38                 | 57    | 42       |
| Professionals                       | 55       | 76    | 51    | 51                 | 67    | 65       |
| <b>c) Household rental income</b>   |          |       |       |                    |       |          |
| Total population                    | 4        | 9     | 3     | 5                  | 8     | 5        |
| Labor force                         | 4        | 9     | 4     | 4                  | 8     | 6        |
| Self-employed                       | 1        | 18    | 7     | 7                  | 15    | 11       |
| Professionals                       | 8        | 11    | 7     | 5                  | 8     | 10       |

Part of the differences between the self-employment rates of whites and minorities in general and blacks and Hispanics in particular, likely arises because of discrimination in the credit market. Firms owned by minorities in general and blacks in particular are much more likely to have their loans denied and pay higher interest than is the case for white males. It does not appear that these results are driven by missing variables such as creditworthiness. I examined the probability an individual would have a business credit card, where the application procedure is usually automated, and the bank does not know

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<sup>62</sup> Source: Lowery (2007) Table A.11-A.13, SBA Office of Advocacy and 2005 Current Population Survey March Supplement

the race of the applicant. In such circumstances I could find no race effects, suggesting this is pure discrimination, confirming earlier work published in Blanchflower et al (2003) using older data from the same survey series.

Discrimination in the credit market remains for minority owners of small firms. Minority-owned firms have their loans denied when they shouldn't and have to pay higher rates of interest when they shouldn't. This amounts to discrimination. This occurs despite the fact that the SSBF likely understates any effects due to its sample exclusions.

Immergluck (1999) utilized Community Reinvestment Act (CRA) data collected from Chicago-area banks to demonstrate that small firms operating in non-minority areas clearly had greater access to bank loans than firms doing business in minority communities. One deficiency in the CRA data analyzed by Immergluck was the exclusion of credit from small businesses utilizing credit cards as their tool for borrowing from area banks. Available evidence indicates that MBEs rely more heavily upon credit-card borrowing to finance their operations than do non-minority firms (see, for example, Bates 1997b). Thus, Immergluck's findings – lacking credit-card borrowings – probably underestimated bank credit availability to Hispanics and black Americans.

Newly available CRA data remedy this problem: bank loans to small businesses in 2001 were reported under new CRA guidelines requiring inclusion of credit-card-based small business borrowings. These expanded loan data reported by Chicago-area banks became available in 2003 and were analyzed by Woodstock Institute staff member Geoffrey Smith, who compared small business loan availability across the region's counties, as well as Chicago's neighborhoods (2003). Smith's study was released in July of 2003.

This issue is important because black- and Hispanic-owned firms are geographically concentrated in Chicago minority neighborhoods (Getzendanner et al., 1990). Bank lending practices limiting small-business credit in these parts of the Chicago region disproportionately harm Hispanics and black Americans. Note that the CRA data provide no insight into loan availability for firms owned by white women and Asians.

Analyzing the Chicago six-county area, Smith found that small-business loans were most widely available in McHenry County and least available in Cook County. The part of Cook County reporting the lowest small-business loan availability, furthermore, was the City of Chicago (Smith, 2003, Table one). Smith then proceeded to disaggregate Chicago proper into 77 distinct neighborhoods and to examine loan availability, relative to the number of small businesses in operation in each neighborhood, in each of the 77 areas. He concluded that "the lowest lending levels occur on Chicago's South and West Sides" (Smith, 2003, p. 3). Smith then calculated, for each neighborhood, the racial composition and the average household income. He found that small-business loan availability in lower income and minority areas was far lower than in higher income, predominantly white areas. Smith concluded, "there appears to be a greater disparity in lending levels based on minority status of a geography than by income level" (2003, p. 4).

Within Chicago, lending levels per small business, as well as average loan sizes, varied widely across neighborhoods. Loan availability was highest in Forest Glen (517 loans) and lowest in Washington Park (40 loans). A small firm in Forest Glen was 3.04 times more likely to receive bank credit than one operating in Washington Park. Loan-size differentials were similar in magnitude: the average loan was \$39,600 in Forest Glen and \$9,500 in Washington Park (Smith, 2003, Table two). The shorter term, more expensive credit-card borrowings were predominant among Washington Park small firms. Not only were Forest Glen firms much more likely to receive bank financing; they were also less reliant upon high-interest credit-card debt. Excluding the Loop, average small business loan size (in Chicago proper) recorded in the CRA data was \$42,400. The neighborhoods toward the bottom of the loan availability ranking were all minority neighborhoods (see Table two, Smith, 2003). Looking solely at small businesses with annual sales of one million dollars or less, loan availability among Chicago neighborhoods was lowest in Englewood, second lowest in Washington Park. At the other extreme, availability was highest in Forest Glen, while Jefferson Park and Dunning were tied for second (Smith, 2003, Table eleven).

Chicago's Hispanic population is less concentrated geographically than Chicago black residents. Yet, overwhelmingly Hispanic areas do exist, and they rank well below average regarding loan availability and size. Gage Park (79 percent Hispanic), for example, ranked 70th in loan availability on a per business basis, and average loan size was \$17,200 (Smith, 2003, Table two). Outside of the Loop, neighborhoods where small-business loan availability was lowest were, in all cases, black (Washington Park, Englewood, West Englewood, Grand Boulevard, Fuller Park, West Garfield Park), Hispanic (South Lawndale, Gage Park), or Hispanic and black (Chicago Lawn). Low loan availability coexisted with high levels of credit-card borrowing and small average loan size. This portrait of small-business lending – drawn from CRA data – is highly consistent with the findings generated from Immergluck's previous analysis of CRA data reported by Chicago-area banks (1999).

Credit market discrimination appears to be important in construction and especially so for firms owned by African Americans and to a lesser extent for firms owned by Hispanics, Asians and white women. Overall I conclude that there remain significant differences between the self-employment rates and earnings of whites and other racial groups. The observed effects are greatest for blacks and to a lesser degree for Hispanics. A good deal of the differences in self-employment rates of white men and minority-owned firms appears to arise because of lack of access to capital. Discrimination in the credit market against small firms owned by blacks and Hispanics in particular remains and shows no sign of abating.

## **9. Trends and prospects for small businesses**

### *a) Trends*

The Small Business Administration in its most recent Quarterly Bulletin, published in February 2009 summarized the economic situation faced by small businesses for the

fourth quarter of 2008 in the following four points (<http://www.sba.gov/advo/research/sbqei0804.pdf>).

1) In the fourth quarter of 2008, the U.S. economy suffered its worst decline since 1982; real GDP fell by an annualized 3.8 percent. Real exports, which had been a bright spot in previous quarters, declined nearly 20 percent (annualized) as the global recession weakened demand for U.S. products. Real imports fell 15.7 percent. Individual and business spending fell too. In annualized terms, real consumption declined 3.5 percent and real gross private fixed investment fell 12.3 percent. Echoing weakened demand, manufacturing output fell to historic lows: the manufacturers' purchasing index sank to its lowest point since 1980, and industrial production declined by an annualized 6 percent.

2) The United States lost 2.97 million jobs in 2008, more than half of them in the fourth quarter. Unemployment rose to 7.2 percent in December. Only education and health services experienced job gains in the quarter. The sectors hit hardest were trade, transportation and utilities; manufacturing; construction; and professional and business services. Small businesses make up a significant share of these. With fewer workers, labor productivity increased at an annualized 3.2 percent. Unincorporated self-employment declined by 500,000 to 9.6 million; incorporated self-employment was unchanged at 5.8 million.

3) According to the National Federation of Independent Business's monthly survey, small business owners' top concern was poor sales. Respondents indicated that the next three months were not a good time to hire and that they may even be likely to lay off workers. Overall, consumers and small businesses were very pessimistic in their economic outlook.

4) In light of the banking sector's weakness, the Federal Reserve and the U.S. Treasury took aggressive actions, including October's Emergency Stabilization Act and the Troubled Asset Relief Program. In addition, the Federal Reserve cut its target federal funds rate to essentially zero. The yields on three-month Treasury bills fell to 0.03 percent in December, reflecting this significant relaxation of monetary policy. Overall, the prime rate was five percentage points lower than in September 2007. Banking standards were much tighter, small business loan demand remained weak, and there were fewer venture capital deals.

5) The effects of inflation earlier in the year were reversed, with the consumer price index falling at an annualized 12.7 percent to return to its 2007 level. Much of this deflation was the result of dramatic declines in oil prices, which fell from \$145 per barrel in July to \$41 in December. Reduced demand was also a factor. Only 550,000 new homes (on an annual basis) were constructed in December, one-quarter of the level of housing starts in 2005.

**Table 45** suggests that business conditions facing small businesses generally deteriorated through 2008 and especially in the final quarter.

- i) Small business bankruptcy filings were up in 2007 compared with 2006.
- ii) Lending standards were tighter and there was less demand for loans
- iii) Business optimism was strongly down
- iv) Small firms were pessimistic about expanding
- v) They were also cutting back on hiring.
- vi) Self-employment had started to fall.

Small business lending had declined so sharply that the Small Business Administration was on track to back only half as many loans this year as it did last year. The SBA's lending data for the just-ended quarter bears out that bleak forecast. The number of loans the agency backed though its flagship program declined 57%.

The SBA backed \$1.59 billion worth of loans in the three months ended March 31, a 47% drop from the same quarter last year. The total number of loans made through the 7(a) program was 8,278, down from more than 19,000 issued a year ago. In the first half of its 2009 fiscal year, the SBA's total 7(a) loan volume was \$3.5 billion, down from the \$6.2 billion lent in the first half of last year.

The SBA's loan programs guarantee a portion of qualifying loans made by banks to small businesses, a system intended to make loans available for ventures that would otherwise be considered too risky. CNN has reported that "stiff collateral requirements and other restrictions have put even SBA loans out of reach for many entrepreneurs, while banks also clamp down on other small business funding channels like credit cards, credit lines and non-SBA loans. Several banking institutions that have pulled out of the SBA's lending program have blamed the secondary market, where banks resell to investors bundles of the loans they've made. Since the fall, that market has been nearly frozen, and banks unable to resell their loans say they lack the liquidity to make new ones".<sup>63</sup>

*b) Prospects*

The prospects for the US economy in 2009 and 2010 are poor. Indeed, economic forecasters have been revising downwards their expectations because of the further intensification of the financial crisis and its effect on credit and wealth, the waning of consumer and business confidence, the marked deceleration in global economic activity, and the weakness of incoming data on spending and employment. The expectation is for a recovery in 2010 and 2011 as a result of the substantial monetary and fiscal stimuli. The latest economic projections of Federal Reserve Governors and Reserve Bank presidents, in January 2009 are as follows.

|                    | 2009         | 2010       | 2011       |
|--------------------|--------------|------------|------------|
| Change in real GDP | -1.3 to -0.5 | 2.5 to 3.3 | 3.8 to 5.0 |

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<sup>63</sup> [http://money.cnn.com/2009/04/02/smallbusiness/smallbiz\\_loans\\_drop.smb/index.htm](http://money.cnn.com/2009/04/02/smallbusiness/smallbiz_loans_drop.smb/index.htm) and [http://money.cnn.com/2009/03/23/smallbusiness/small\\_biz\\_bank\\_lending.smb/index.htm?postversion=2009032316](http://money.cnn.com/2009/03/23/smallbusiness/small_biz_bank_lending.smb/index.htm?postversion=2009032316)

|                   |            |            |            |
|-------------------|------------|------------|------------|
| Unemployment rate | 8.5 to 8.8 | 8.0 to 8.3 | 6.7 to 7.5 |
| Inflation         | 0.3 to 1.0 | 1.0 to 1.5 | 0.9 to 1.7 |

However, the Federal Reserve staff review of the economic outlook in the latest FOMC minutes for January 2009 was not optimistic about the prospects for the *housing market*.<sup>64</sup>

"Participants saw no indication that the housing sector was beginning to stabilize. Though sales of existing homes appeared to have flattened out, a large fraction of those transactions seemed to have resulted from foreclosures or other forced sales; moreover, new home sales, housing starts, and permits all continued to decline steeply. Lower house prices and mortgage rates had increased housing affordability, but concerns that house prices may fall further appeared to be holding back potential buyers."

Or, indeed for *commercial construction*

"The pace of commercial construction also had slowed. A number of participants expressed concern that the commercial real estate sector could deteriorate sharply in the months ahead. They noted that a large number of commercial real estate mortgages will come due at a time when banks likely will still be facing balance-sheet constraints, the ability to securitize commercial real estate mortgages may remain severely restricted, and vacancy rates in commercial properties could well be climbing. Some participants worried that the outcome could be an increase in defaults on commercial real estate mortgages and forced sales of commercial properties, which could push prices down further and generate additional losses on banks' commercial real estate loan portfolios. However, the commercial real estate sector had expanded more moderately during the recent expansion than during the expansion of the late 1980s, suggesting that the downturn in the current cycle could be milder than that seen in the early 1990s."

On April 16th, 2008 Governor Frederic S. Mishkin testified on small business lending before the Committee on Small Business and Entrepreneurship of the U.S. Senate. Mishkin. He noted that at that time there was a continuing trend toward tighter credit supply conditions for small businesses. For example, in the Board's most recent Senior Loan Officer Opinion Survey, conducted in January, a net one-third of the domestic banks surveyed reported that they had tightened their lending standards on commercial loans to small firms over the previous three months. Mishkin further noted that significant net fractions of banks also indicated that they had tightened price terms on commercial loans to both small and large firms.

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<sup>64</sup> <http://www.federalreserve.gov/monetarypolicy/files/fomcminutes20090128.pdf>



"Perhaps one of the most important concerns about the future prospects for small business access to credit is that many small businesses use real estate assets to secure their loans. For example, data from our 2003 Survey of Small Business Finances (SSBF) indicate that 45 percent of the total dollar amount of small business loans outstanding in 2003 was collateralized by some type of real estate asset.<sup>65</sup> About 37 percent was collateralized by business real estate assets, and 15 percent was secured with "personal" real estate. Looking forward, continuing declines in the value of their real estate assets clearly have the potential to substantially affect the ability of those small businesses to borrow. Indeed, anecdotal stories to this effect have already appeared in the press.

Similarly, declines in the value of real estate assets held by banks and other lenders could affect their willingness and ability to supply loans, as real estate losses use up capital that could otherwise be used for making new loans. Indeed, there are reasons to believe that these forces are currently at work not only at large banks, where the initial problems were observed, but across the full size spectrum of banking organizations. As noted previously, more stringent loan terms are already in place. In addition, banks across all size groups, including community banks, have recently experienced a sharp deterioration in credit quality, mostly within loans secured by real estate. Moreover, if banks continue to place on their balance sheets some assets that they had expected instead to place in conduits or otherwise sell to investors, the move could crowd out loans to small businesses and other borrowers." Mishkin (2008),

and later.

"The interdependencies between small business and household finance are among the most interesting and least understood aspects of small business access to credit. In addition to personal real estate assets, other household assets such as automobiles may be used as collateral for small business loans, and personal credit cards and savings accounts are sometimes used to help finance a small business. For example, our SSBF documents that, in 2003, almost 47 percent of small businesses used personal credit cards in the conduct of their business. At that time, most of this use appeared to have been for convenience rather than for longer-term borrowing. However, to the extent that small businesses become more reliant on credit cards as a source of funding, perhaps because of a decline in their own financial condition or because of a tightening in other aspects of credit supply, they may end up facing higher interest rates than would otherwise be the case." Mishkin (2008).

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<sup>65</sup> See Mach and Wolken (2006).

The trends that Mishkin noted have continued apace, making it especially hard for small firms to obtain credit. This is especially apparent from three further data sources.

*1. The Reserve Board of Governor's Senior Loan Officer Opinion Survey*

The January 2009 Senior Loan Officer Opinion Survey on Bank Lending Practices conducted by the reserve Board of Governors addressed changes in the supply of, and demand for, loans to businesses and households over the preceding three months. In the January survey, the net fractions of respondents that reported having tightened their lending policies on all major loan categories over the previous three months stayed very elevated. Relative to the October survey, these net fractions generally edged down slightly or remained unchanged. Respondents indicated that demand for loans from both businesses and households continued to weaken, on balance, over the survey period.

The staff review at the Federal Reserve on lending suggested it was less available than even in the recent past.

"Commercial bank credit fell for the second consecutive month in December. Commercial and industrial loans declined in November and December, likely reflecting a combination of tighter credit supply and reduced loan demand as well as some unwinding of the surge during September and October. The Senior Loan Officer Opinion Survey conducted in January indicated that banks had continued to tighten credit standards and terms on all major loan categories over the past three months. Survey respondents also indicated that they had reduced the size of credit lines for a wide range of existing business and household customers."<sup>66</sup>

About 65 percent of domestic banks reported having tightened lending standards on commercial and industrial (C&I) loans to large and middle-market firms over the past three months (Table 46). This percentage was down from the reported tightening in the October survey but still above the previous peaks reported in 1990 and 2001. At about 70 percent, the fraction of domestic respondents that tightened standards on C&I loans to small firms was only slightly lower than that found in the October survey. Significant majorities of domestic respondents indicated that they had further tightened price terms on C&I loans to firms of all sizes over the past three months. Around 90 percent of domestic banks indicated that they had increased spreads of loan rates over their cost of funds for C&I loans to large and middle-market firms and to small firms--fractions slightly lower than those in the October survey. Likewise, very large fractions of banks reported having charged higher premiums on riskier loans and having increased the costs of credit lines to firms of all sizes over the survey period.

On the net, the fractions of banks that reported having tightened non-price terms on C&I loans to large and middle-market firms over the past three months stayed at an elevated level but declined relative to the October survey. Large fractions of banks again noted

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<sup>66</sup> <http://www.federalreserve.gov/monetarypolicy/files/fomcminutes20090128.pdf>

that they had reduced both maximum size and the maximum maturity of loans or credit lines to firms of all sizes. In addition, about 70 percent of all domestic respondents reported having tightened covenants on C&I loans to large and middle-market firms and about 60 percent reported having done so on such loans to small firms.

The survey found that about 80 percent of domestic banks reported that they had tightened their lending standards on commercial real estate (CRE) loans over the past three months, slightly less than the roughly 85 percent that reported doing so in the October survey. Over 2008 as a whole, about 95 percent of domestic banks increased their loan-rate spreads, and about 80 percent tightened their loan-to-value ratios. About 75 percent of foreign respondents, on net, reported wider loan-rate spreads, and about 65 percent, on net, had reduced their loan-to-value ratios. About 30 percent of the domestic respondents indicated that the shutdown of the CMBS securitization market had led to an increase in CRE lending at their bank over the second half of 2008, whereas about 15 percent indicated that the shutdown of the CMBS securitization market had reduced the volume of their CRE lending.

Smaller, though still substantial, fractions of domestic respondents reported having tightened lending standards on prime and nontraditional residential mortgages in the January survey. About 45 percent of domestic respondents indicated that they had tightened their lending standards on prime mortgages over the past three months, and almost 50 percent of the 25 banks that originated nontraditional residential mortgage loans over the survey period reported having tightened their lending standards on such loans. About 10 percent of domestic respondents saw weaker demand, on net, for prime residential mortgage loans over the past three months, a significantly lower fraction than the roughly 50 percent that so reported in the October survey. About 65 percent of respondents - a slightly lower percentage than in the October survey - reportedly experienced weaker demand for nontraditional mortgage loans over the same period. Only four banks reported making sub-prime mortgage loans over the past three months.

On net, about 60 percent of domestic respondents, down from 75 percent in the October survey, noted that they had tightened their lending standards for approving applications for revolving home equity lines of credit (HELOCs) over the past three months. Twenty percent of domestic banks, on net, reported weaker demand for HELOCs over the past three months, slightly less than the percentage that had reported weaker demand in the October survey.

## *2) The Duke/CFO Magazine Business Outlook Survey*

Every quarter, the Duke/CFO Magazine Business Outlook Survey polls hundreds of chief financial officers to gauge the prospects of individual companies and the economy at large. In the most recent survey published in December 2008 Chief financial officers in the United States were more pessimistic than at any time in the history of the survey. The majority of chief financial officers in the U.S. and Europe say their firms will reduce spending and employment in 2009, and their firms will post losses. The recession will last another year, according to nearly two-thirds of CFOs. (<http://www.cfosurvey.org>)

- A record 81 percent of U.S. CFOs are more pessimistic about the economy this quarter (twice as many as in the preceding quarter)
- Nearly 60 percent of CFOs say the U.S. economic recovery will be delayed until the fourth quarter of 2009 or later.
- Employment is expected to fall by 5 percent in the U.S. and Europe in 2009, and by 0.5 percent in Asia. Capital spending is expected to fall by about 10 percent in all regions.
- Weak consumer demand and financial market woes are major concerns for CFOs around the world. More than 70 percent of U.S. and European firms are concerned about the state of their financial institutions.

Among companies that have been affected by credit market turmoil, 62 percent say they cannot access the credit they need, and half say the cost is higher when they are able to access it. About one-third of companies have had difficulty establishing or renewing bank lines of credit. Conditions are worst for lower-rated firms (Table 47). The Duke survey found that more than 75 percent of firms say that, in the current environment, financial constraints have limited their ability to invest in profitable projects.

### *3) The NFIB National Small Business Poll*

The *National Small Business Poll* is a series of regularly published survey reports based on data collected from national samples of small business employers which is conducted by The National Federation of Independent Business. The most recent survey was conducted at the end of 2008 and specifically focused on access to credit.<sup>67</sup> The data for this survey report were collected for the NFIB Research Foundation by The Gallup Organization. The interviews were conducted between October 22, 2008 - November 17, 2008 from a sample of small employers. "Small employer" was defined for purposes of this survey as a business owner employing no fewer than one individual in addition to the owner(s) and no more than 249.<sup>67</sup> The main findings of the survey were as follows (Table 48).

- One-third (34%) of small business owners, defined as small employers having 250 or fewer employees, think the nation's financial problems have "significantly" affected their business and one-quarter (26%) think it threatens their survival. However, 45 percent designate slow or lost sales as their principal immediate problem, followed by the unpredictability of business conditions (23%), falling real estate values (9%) and only then an inability to obtain credit, tight credit drawing virtually the same number of cites as the real estate value issue.
- Since the beginning of early September, 30 percent of small employers applied for credit in one form or another, at least half of which applied more than one time. Seventy

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<sup>67</sup> The NFIB National Small Business Poll: Access to Credit, Volume 8(7), 2008. ([www.nfib.com/research](http://www.nfib.com/research)) They are also available at [www.411smallbusinessfacts.com](http://www.411smallbusinessfacts.com)

(70) percent did not apply of which 12 percent, or 8 percent of the population, did not apply because they thought they could not get credit they wanted.

- Forty-one (41) percent of small employers applying since early September obtained all the credit they wanted, while 8 percent obtained most of it. However, 14 percent obtained just some of the credit they wanted and 34 percent obtained none of it.

- The ability to obtain credit appears statistically related to financial strength, as measured by greater sales growth in the last two years, fewer mortgages taken out to finance other business activity, fewer upside-down properties, as well as the owner's positive evaluation of firm performance against the competition, and firm maturity, more specifically, years of operation. Discouraged borrowers, that is, owners who do not attempt to borrow for fear of rejection, are statistically related to what appears to be weak balance sheets, specifically, falling real sales over the last two years, ownership of more upside-down properties, lesser use of real estate for collateral, more mortgages taken out to finance other business activity, and the owner's negative evaluation of firm performance against the competition.

- Financial institutions changed the terms or conditions of a loan, line or credit card for 18 percent of small employers. (This figure is somewhat low because only the largest line of credit and the most important credit card used for business were evaluated.) Most of the changes would be termed negative, such as a lower limit on a credit card or higher interest on a line of credit, though not all changes, particularly with respect to lines, were adverse. About four in 10 report the changes as harmful to the business while the other six claim the changes either had no impact or were more irritating than harmful.

- Small business owners are heavily invested in real estate. Ninety-six (96) percent own their personal residence, 49 percent own all or part of the building and/or land on which their business sits (excluding the one-quarter who operate primarily from the home), and 41 percent own investment real estate, excluding their residence and business.

- Real estate, particularly home mortgages, is frequently used to finance or collateralize other business assets. Seventy-six (76) percent have at least one mortgage on the real estate they own with 13 percent having three or more mortgages, 22 percent having taken out at least one mortgage to finance business activities. Sixteen (16) percent use real estate to collateralize other business assets, including 10 percent who use their homes as collateral. About one in 10 (9%) own at least one currently upside-down property. The financial leverage homes provide businesses in a weak economy with declining real estate values is a matter of concern.

- Trade credit is growing more difficult to procure. Of the 80 percent who use trade credit, 30 percentage points think it has been getting tighter since early September, 14 percentage points a lot tighter, while 46 percentage points see no change.

Trade credit exists when one firm provides goods or services to a customer with an agreement to bill them later, or receive a shipment or service from a supplier under an

agreement to pay them later. Wikipedia suggests it can be viewed as an 'essential element of capitalization in an operating business because it can reduce the required capital investment to operate the business if it is managed properly'. Trade credit is the largest use of capital for a majority of business to business sellers in the United States and is a critical source of capital for a majority of all businesses. For many borrowers in the developing world, trade credit serves as a valuable source of alternative data for personal and small business loans. For example, Wal-Mart, the largest retailer in the world, has used trade credit as a larger source of capital than bank borrowings; trade credit for Wal-Mart is 8 times the amount of capital invested by shareholders. There are many forms of trade credit in common use. Various industries use various specialized forms. They all have, in common, the collaboration of businesses to make efficient use of capital to accomplish various business objectives.

Boissay and Gropp (2007) have noted that trade credit is the single most important source of external finance for firms.<sup>68</sup> It appears on every balance sheet and represents more than one half of businesses' short term liabilities and a third of all firms' total liabilities in most OECD countries. Yet, trade credit tends to be very expensive with implicit annual interest rates of about 40%. This, the authors note, has sparked a large literature on why firms use trade credit despite its high cost. Many recent theories emphasize that firms use trade credit because they are unable to obtain funds from the financial sector. A number of reasons have been offered why suppliers may still be willing to lend when banks are not, including that suppliers have more accurate information about their customers than banks (Biais and Gollier, 1997; Petersen and Rajan, 1997), that suppliers have advantages in liquidating collateral (Mian and Smith, 1992; Frank and Maksimovic, 1998; Longhofer and Santos, 2003), that moral hazard and cash diversion problems may be less important for interfirm relationships than for bank-firm relationships (Burkart and Ellingsen, 2004) and that suppliers and their customers may have a common interest in mutual survival due to shared rents from long standing business relationships (Wilner, 2000; Cuñat, 2006).

Boissay and Gropp (2007) showed that there seems to be inter-firm lending via trade credit links to credit constrained firms, but that trade credit serves two distinct functions. One, suppliers may insure their customers against liquidity shocks and second, liquidity is allocated within the corporate sector along trade credit chains to where it is needed most, i.e. where credit constrained firms experienced adverse shocks.

Boissay and Gropp (2007) note that much of the previous empirical literature, starting with Meltzer (1960) has examined whether firms increase their use of trade credit under adverse circumstances. Meltzer (1960) showed that in periods of monetary tightening, large liquid firms increase the amount of trade credit extended. In the same vein, subsequent empirical work has focused on the financing role of trade credit and the substitution effects between trade credit and bank loans at the aggregate level. Under the assumption that trade credit is substitutable to bank loans, the literature generally argues that simultaneous decreases in bank loans and increases in trade credit indicate that firms

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<sup>68</sup> This section draws heavily on the work of Boissay and Gropp (2007).

are unable to obtain financing from banks (Kashyap et al., 1993) and that trade credit works to mitigate the effects of firms' financial constraints (Calomiris et al., 1995).

Specifically, using a unique data set for French firms Boissay and Gropp (2007) show that small, illiquid firms with little access to outside finance pass liquidity shocks on to their suppliers by defaulting on trade credit. If the supplier is also small and illiquid and cannot raise fresh funds on short notice, a substantial portion of the shock is likely to be passed on further down the trade credit chain. Large liquid firms ("deep pockets") with access to outside finance ultimately tend to absorb at least some of these shocks and hence inject new liquidity into the system. In this way credit constrained firms avoid having to liquidate assets. Trade credit default chains can serve a useful role in allocating liquidity to credit constrained firms. Overall the paper points to the existence of symbiotic relationships between suppliers and their customers. Customers are willing to buy on credit even though the implicit interest rate that is charged is higher than the credit market rate because they do not have access to the credit market. Suppliers are willing to lend because they can threaten to stop the supply of customized goods. They also have an incentive to ensure the survival of their customers and therefore are willing to permit trade credit defaults.

Aaronson et al (2004) examine supplier relationships and the use of trade credit among minority small businesses and documents the importance that ethnic and geographic supplier ties play. Using data from a survey of small businesses in two Chicago neighborhoods, neighborhoods, Little Village and Chatham, they found that the importance may differ across communities. Little Village is a predominantly Hispanic area, mostly of Mexican origin, on the southwest side of Chicago with a population of 81,155 and a median family income of \$23,259, as of the 1990 census. Substantial numbers of Hispanics migrated into the community beginning in the 1960s and the area became predominantly Hispanic in the 1970s. Chatham is a mostly Black community on the south side of Chicago with a 1990 population of 36,779 and a median family income of \$29,258. Chatham became predominantly Black during the 1950s. The survey asked respondents to provide detailed information on their trade credit relationships, including the length of the relationship and the ethnicity and location of suppliers. As such, the surveys represent the first and, to our knowledge, only data sources that permit a direct and simultaneous assessment of the importance of these factors in shaping the nature of supplier relationships.

For all ethnic groups combined, Aaronson et al (2004) found that the bulk of firms fall into the retail or service sector (Table 49). Within groups, Black-owned firms are concentrated in services, while Hispanic-owned firms are relatively balanced across industries. The average age of the current business for all groups is about 9 years, with firms owned by Blacks on the high side (11.6 years) and Hispanic-owned firms on the low (6.9 years). Most of these firms employ relatively few workers, on average about 4.5 per firm. About one-third of all owners are women, and Hispanic and especially Black owners are more likely to be female. Overall, the bulk of the owners are at least high school graduates and about a quarter have a college degree. However, educational attainment varies across ethnic groups. The proportion of Hispanics in the sample who do

not have a high school degree (49.4 percent) is over three times as high as the corresponding proportion for Blacks, the group with the next highest figure. Hispanic owners (9 percent) are least likely to have a college degree and a relatively low proportion (70.5 percent) is proficient in English. They measure the use of trade credit by an indicator variable for whether or not a supplier offers trade credit to a business owner. Trade credit is available to many of the businesses in Little Village and Chatham, as 49.7 percent of the firms in the sample were offered credit by their suppliers. Similar proportions of Hispanic- (44.4 percent) and Black-owned firms (42.4 percent) are offered credit by their suppliers. These are relatively low proportions compared with whites (61%) and Asians (78%).

Aaronson et al (2004) found that working with a nearby supplier and, in cases where language appears to be an issue, with a Hispanic supplier are associated with more credit for Hispanic-owned firms. However, no comparable relationships were observed for Black-owned firms. Aaronson (2004) also examined the supply and use of trade credit using the 1993 NSSBF. In multivariate analysis using the NSSBF they found that, relative to white businesses there were statistically significant differences in access to trade credit existed between White-owned and Hispanic-owned firms, and, less strongly, between Black-owned and Hispanic-owned firms, but not between White-owned and Black-owned firms. Hispanic firms were 7.7 percent less likely than White firms and 5.5 percent less likely than Black firms to have used any trade credit in the last year, although the latter point estimate is not statistically significant at conventional levels.

We can update this analysis using the 2003 SSBF. Respondents are asked if they use trade credit. Overall 60% of firms reported they used trade credit but rates were much higher for firms owned by white males (66%) than for those owned by white females (48%); blacks (35%); Asians (56%) or Hispanics (51%). In columns 1 and 2 of **Table 50** I estimate the probability of a firm making use of trade credit. In column 1 I only include race and gender dummies. In every case the probability of having trade credit is significantly lower than for white males. In the second column I include a similar set of controls to those used by Aaronson et al, who included controls for firm characteristics include assets, profits, and sales growth; geographic region, urban status, and two-digit industry; whether the business is incorporated, publicly traded, or a franchise; and measures of firm credit quality, such as whether the firm was delinquent on business obligations in the last three years. I include two-digit industry; region, # employees; firm age; family firm; controls on firm and personal bankruptcy; delinquent on loans as well as personal judgments; D&B credit rating, sales, assets and profits. When these controls are included only black-owned firms have significantly lower probabilities. In columns 3 and 4 I model the probability of being denied trade credit. There are no significant race or gender effects.

**Chart 2** reports the Baltic Dry Index (BDI) which is a benchmark for shipping costs of 'dry' bulk commodities like iron ore, copper and grains. It was close to 12,000 in June and fell to below 1000. From the bottom of 663 in December 2008, the BDI has risen to a current level of 1,538 on April 3<sup>rd</sup> 2009, having fallen from recent higher levels. Increasing demand from, for instance, China which is the biggest consumer of the steel-



making raw material. The Chinese are building supplies of iron ore to be able to execute their stimulus projects. *Declines in trade credit around the world have been particularly important in the slowing of world trade and hence in the decline in the BDI.* In recent months trade financing costs soared globally to more than six times pre-crisis levels.

As was noted above in the *NFIB National Small Business Poll* trade credit is becoming increasingly difficult to obtain for small firms. According to data from the 1993 National Survey of Small Business Finance, trade credit accounted for 31.3 percent of the total debt for small businesses in 1993, and 60.8 percent of small firms had outstanding credit from suppliers - see Cole and Wolken (1995) and Berger and Udell (1995).<sup>69</sup>

#### **10. Availability of firms**

Some commentators – principally George La Noue<sup>70</sup> - have advocated that the appropriate way to estimate availability is through the use of bidder lists. In my view this is a singularly inappropriate thing to do; using a bidder list assumes away the existence of discrimination. It is perfectly possible that discrimination could have infected all aspects of a firm's work environment including being able to bid. Supposing that minority and women owned firms (MBE/WBEs) are kept out of the (prime) bidder's club because of some form of discrimination. A further possibility of course is that primes choose not to work with MBE/WBE subcontractors for discriminatory reasons. What would the consequences of these two courses of discriminatory action be? It would imply that MBE/WBEs had missed, and/or were currently missing out on contracts they potentially could have obtained, absent discrimination. There are many consequences of such discrimination as it could potentially impact on all aspects of a firm's business. In the case of a MBE/WBE it is possible that discrimination could impact

1. a firm's ability to obtain bonding, licensing or equipment,
2. a firm's ability to obtain relevant experience,
3. the entry rate into an industry,
4. the exit rate into an industry,
5. a firm's ability to gain access to capital,
6. whether a firm is "qualified" to tender on a particular project,
7. whether a firm is "willing" to tender on a particular project,
8. whether a firm is "able" to tender on a particular project,
9. whether a firm is "ready" to tender on a particular project,
10. the number of employees a firm has at a particular moment of time,
11. a firm's profit level,
12. a firm's level of sales,
13. the growth rate of a firm's sales,
14. whether a firm bids for a particular project,

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<sup>69</sup> See Mian and Smith (1992), Petersen and Rajan (1994), and Ng et al. (1999) for more discussion of the theory and practice of trade credit.

<sup>70</sup> G. La Noue 'Who counts: measuring the availability of minority businesses after Croson', in Harvard Journal of Law and Public Policy, Fall 1998, pp.101-141

15. and even whether a firm is able to survive at all from one period to the next.

If discrimination against MBE/WBE's occurs it is perfectly plausible that, as a consequence of that discrimination, non-MBE/WBEs would, for example, have more employees, be more successful and hence have higher sales than MBE/WBEs, be more profitable, have access to more capital than MBE/WBE's because of discrimination against some or all MBE/WBEs. If non-MBE/WBEs are able to enforce some control over suppliers, perhaps by restricting access of MBE/WBEs to particular supplies or even by delaying the delivery of goods, this could result in MBE/WBEs being unable to bid on a particular project or projects.

In consequence of any discrimination that exists in the market place, a bidder list is likely to provide a *lower bound estimate* of the number of MBE/WBEs available to work on highway construction projects for MnDOT. Far from providing information on the extent of availability in the *absence* of discrimination, a bidder list provides an estimate of the availability of MBE/WBEs in the *presence* of discrimination. Discrimination can prevent firms from bidding. As we will discuss in more detail below, there are also other reasons for being very cautious about the use bidders lists including the possibility that they are open to manipulation by business organizations who have incentives to artificially raise the number of bids from non-MBE/WBEs, which would then lower the availability rate of MBE/WBEs.

The fact that a firm bid in the past – they were ‘ready, willing and able’ – does not imply that they will bid in the future. Firms that did not bid in the past may bid in the future. Firms that had bid in a previous period may not bid the following year because they successfully won their contracts last year and are fully engaged in doing that work currently. Given that MBE/WBE's generally bid less frequently than non-MBE/WBE's this bias will result in a bidder list *understating* availability. Far from providing information on the extent of availability in the *absence* of discrimination, a bidder list provides an estimate of the availability of MBE/WBEs in the *presence* of discrimination. Discrimination can prevent firms from bidding.

This can be illustrated in the following hypothetical example. Over the past year, there are 90 non-MBE/WBEs and ten MBE/WBEs that have submitted bids. Currently 50 non-MBE/WBEs are working at full capacity on a huge project that could last let's say two years. Because they bid and won projects last year from the City of Chicago, that means they will be unavailable to bid for the next two years. Using bidder's lists MBE/WBE availability is going to be ten of 100, or 10 percent. In reality, actual availability would be ten out of 50 or 20 percent.

A further complication would arise if goals were to be based on a sample of bidders. If the availability of MBE/WBEs was calculated simply as the proportion of all firms that were MBE/WBEs with the selection rule determining which firm gets into the sample based on who had bid in the past, then this is subject to manipulation. Members of an organization opposed to a MBE/WBE program, who are primarily non-MBE/WBEs, would have an incentive to encourage as many firms as possible to bid on projects in a

given year. Members of an organization in one area could do a deal with those in another area to place very high bids that had no chance of being accepted. The pattern would be repeated in reverse. This would have the effect of artificially reducing the MBE/WBE availability rate.

Let's set up an hypothetical example, last year 100 MBE/WBEs and 900 non-MBE/WBEs placed bids to give an availability rate of  $100/1000=10\%$ . Next year the same number of MBE/WBEs and non-MBE/WBEs in the area bid but now the non-MBE/WBEs encouraged 300 non-MBE/WBEs from outside of Chicago to make artificially high bids, none of which had a chance of being taken. The availability rate has now been artificially reduced to  $100/1300=7.7\%$ . This problem would not arise if goals were set based on dollars won in bid letting or if steps to ensure that bids that were non-responsive were excluded from any availability count. It would clearly not be appropriate to set goals based on a measure that is open to manipulation by contractors. Discrimination can potentially influence who bids, when they bid, how often they bid and whether their bid can win. For this reason, in my view, the only use for bidder lists is to identify a *lower bound* to MBE/WBE availability.

In principle, calculating availability by determining what proportion of all firms existing in a marketplace are minority and women-owned firms, in my view is an appropriate thing to do if one is attempting to estimate availability in the *absence* of discrimination. Counting availability based on qualified primes and registered subcontractors, in all likelihood *undercounts* the number of MBE/WBE firms that would exist, absent discrimination, as it will *exclude* any firms who were forced to close because of discrimination. Such firms would have been in existence and doing business if they had not been discriminated against. This count of firms in existence would also be an underestimate of the number of firms that would be in existence absent discrimination if discrimination prevented new MWBEs from opening in the first place.

Firms that work as prime contractors often work as subcontractors and vice versa. Firms who work in narrow specialties can take on staff and broaden the areas they work in. Furthermore, the choice of an individual's occupation is not an exogenous event – an individual's occupation itself may be influenced by discrimination. Similarly, the particular types of work an MBE/WBE does may also be influenced by the presence of discrimination. MBE/WBEs in highway construction may choose to do particular types of work such as landscaping because they are precluded from other more profitable types of work, perhaps because of collusion between existing groups of contractors. In the absence of discrimination MBE/WBEs are free to choose whatever types of work they like, and this might well be different from the types of work they undertake in the year 2009. The type of activity MBE/WBEs are able to perform in the presence of discrimination may or may not be the same set of activities they would perform if they had the free choice in the absence of discrimination. I would expect MBE/WBEs to perform a broader range of activities than is observed currently if given a free choice unfettered by the *coercive* influence of discrimination. Not least of which would probably be a much greater access to prime contracting than is true today.

The first step in estimating MWBE availability is to define the relevant markets for City of Chicago construction contracting. Markets have both a product and a geographic dimension,<sup>71</sup> both of which were considered in constructing our estimates of MWBE availability. Once the appropriate markets have been defined, we can estimate the number of establishments present in those markets, as well as the number that are owned by minorities or women. The City of Chicago ordinance sets out the six-county region surrounding the City as the appropriate geographic market area for purposes of this report. This six county region consists of Cook, DuPage, Kane, Lake McHenry and Will Counties.

MWBE availability (unweighted) is defined as the number of MWBE establishments divided by the total number of establishments in the geographic market in industries relevant to the City's construction activities.<sup>72</sup> Determining the total number of establishments in these industries is more straightforward than determining the number of MWBEs in those markets. The latter task has three main parts: (1) identify all listed MWBEs in the relevant markets, (2) verify the ownership status of listed MWBEs, and (3) estimate the number of unlisted MWBEs in the relevant markets. This section describes how these three tasks were accomplished.

#### *A. Estimate the Total Number of Establishments in the Market*

We obtained data from Dun & Bradstreet's (D&B) databases to determine the total number of establishments operating in the relevant geographic area and in construction and trucking. This database, which contains over 11.5 million records, is updated continuously. For this report, we used the data collected in 2008Q1. Each record represents a business establishment and includes the company name, address, telephone number, primary four-digit SIC code, secondary SIC code(s) (if any), business type, DUNS Number (a unique number assigned to each establishment by Dun & Bradstreet) and other descriptive information including employment. Dun & Bradstreet gathers and verifies information from many different sources. These sources include annual management interviews, payment experiences, bank account information, filings for suits, liens, judgments and bankruptcies, news items, U. S. Postal Service, utility and telephone service, business registrations, corporate charters, Uniform Commercial Code filings, and records of the Small Business Administration and other governmental agencies.

We added to that information on registered MWBE's/DBE's from a list of public sector organisations including the City of Chicago; Cook County, Chicago METRA and the State of Illinois as well from a number of minority organisations including Black Contractors United; HACIA; BEP Vendors and North West Indiana. In some cases the

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<sup>71</sup> See, for example, Areeda, Phillip, and Louis Kaplow, *Antitrust Analysis: Problems, Text, Cases*, Boston: Little, Brown and Company, 4th Edition, 1988.

<sup>72</sup> To yield a percentage, the resulting figure should be multiplied by 100.

firm was not in the database and in others the minority status was not identified, so we added where appropriate. In some cases D&B had not reported that the firm was minority so I altered accordingly.

Overall we have 37,418 firms in the database that we obtained from D&B after appropriate deletions. Of these we have 16,954 firms from Cook County; 5,013 from DuPage County; 2,276 from Kane County; 3,691 from Lake County 1,994 from McHenry County and 3,401 from Will County. It was also decided to broaden the geographic area a little wider to examine availability of firms from three further counties in Illinois, DeKalb; Grundy and Kendall. Indeed, there are grounds for suggesting that these three counties should also be covered by the Ordinance. The argument here is primarily one of simplicity but it would also have the effect of expanding the pool of firms from which the City may draw. Adding these three counties would mean that the City of Chicago's construction program could then be designed as the Chicago, IL Primary Metropolitan Statistical Area (PMSA) also called the Chicago-Naperville-Joliet, IL Metropolitan Division. This area is the sum of Cook County; DeKalb County; DuPage County; Grundy County; Kane County; Kendall County; Lake County; McHenry County and Will County as defined by the Office of Management and Budget. The reason for doing so is primarily to make the area consistent with published data. All of the firms from these three counties would, of course, have to be certified in the usual way. There is every likelihood that owners of firms who reside in these counties work primarily in the City of Chicago, given that the City is likely their primary market. In addition City residents likely form majorities in their workforces. These counties are close neighbours to the City of Chicago.

There are 558 firms from DeKalb County, Illinois; 324 from Grundy County and 555 from Kendall County Illinois in the database. We have added a further 687 firms from the various MWBE/DBE lists from the organisations listed above, giving us a database of 38,105 firms in all. Included in this master file are 2,652 firms from Lake and Porter Counties of Northern Indiana, distributed as follows across the following cities. Beverly (Shore (2); Boone (Grove (1); Brook (12); Cedar (Lake (84); Chesterton (99); Crown (Point (320); Dyer (110); East (Chicago (58); Gary (282); Goodland (10); Griffith (97); Hammond (240); Highland (95); Hobart (105); Lake (Station (22); Lowell (112); Merrillville (119); Munster (60); Portage (143); Porter (6); Roselawn (2); Schererville (1); Saint (John (88); Schererville (129); Schneider (1); Tefft (2); Valparaiso (429) and Whiting (35). There are also grounds for including these two counties into the Ordinance given their proximity to the City of Chicago. These two Indiana counties are also reasonably close neighbours of the City. They are small in size and hence their inclusion will have only a minor impact; there is a reasonable expectation that a significant proportion of their business is undertaken in the City and that when they do work in Chicago a significant proportion of their workforce would be City residents.

I also decided to include firms that reported being in Landscaping (SIC 781/782/783) - with 78 observations, Local Trucking (SIC4212) - with 2810 observations - and Architects (8712) with 18 observations. They are distributed across the two states as follows.

|                               | <u>Illinois</u> | <u>Indiana</u> | <u>Total</u>  |
|-------------------------------|-----------------|----------------|---------------|
| Landscaping                   | 75              | 3              | 78            |
| Single family homes           | 9,301           | 728            | 10,029        |
| Contractors not res homes     | 1,261           | 83             | 1,344         |
| Operative builders            | 247             | 9              | 256           |
| Builders industrial buildings | 294             | 27             | 321           |
| Gen construction              | 985             | 66             | 1,051         |
| Highway & street              | 573             | 37             | 610           |
| Water sewer                   | 317             | 18             | 335           |
| Heavy construction            | 168             | 23             | 191           |
| Plumbing                      | 4,235           | 328            | 4,563         |
| Painting                      | 2,239           | 168            | 2,407         |
| Electrical                    | 2,737           | 186            | 2,923         |
| Masonry                       | 843             | 58             | 901           |
| Plastering                    | 565             | 58             | 623           |
| Tiles                         | 340             | 21             | 361           |
| Carpentry                     | 1,343           | 71             | 1,414         |
| Floor laying                  | 749             | 45             | 794           |
| Roofing                       | 1,525           | 120            | 1,645         |
| Concrete                      | 1,068           | 85             | 1,153         |
| Water well drilling           | 69              | 13             | 82            |
| Structural steel inst.        | 125             | 10             | 135           |
| Glass install                 | 164             | 14             | 178           |
| Excavation                    | 610             | 49             | 659           |
| Wrecking                      | 109             | 12             | 121           |
| Install buildings             | 106             | 9              | 115           |
| Special trades nec            | 2,187           | 155            | 2,342         |
| Trucking                      | 2,555           | 255            | 2,810         |
| Architects                    | 17              | 1              | 18            |
| <b>Total</b>                  | <b>34,807</b>   | <b>2,652</b>   | <b>37,459</b> |

These are distributed by race as follows across the six counties.

|                 | <u>All sectors</u> |       | <u>Construction only</u> |       |
|-----------------|--------------------|-------|--------------------------|-------|
| Black           | 537                | 1.6%  | 465                      | 1.5%  |
| Hispanic        | 596                | 1.8%  | 528                      | 1.7%  |
| Asian           | 179                | 0.5%  | 166                      | 0.5%  |
| Native American | 25                 | 0.1%  | 24                       | 0.1%  |
| White woman     | 1,923              | 5.5%  | 1,746                    | 5.6%  |
| MWBE - no race  | 210                | 0.6%  | 191                      | 0.6%  |
| White male      | 30,546             | 89.8% | 28,285                   | 90.1% |
| Total           | 34,016             |       | 31,405                   |       |

Overall, including the Indiana and 3 additional Illinois counties the distributions were very similar.

|                 | All sectors |       | Construction only |       |
|-----------------|-------------|-------|-------------------|-------|
| Black           | 564         | 1.5%  | 488               | 1.4%  |
| Hispanic        | 618         | 1.6%  | 550               | 1.6%  |
| Asian           | 182         | 0.5%  | 169               | 0.5%  |
| Native American | 30          | 0.1%  | 29                | 0.1%  |
| White woman     | 2,093       | 5.5%  | 1,898             | 5.4%  |
| MWBE - no race  | 214         | 0.6%  | 195               | 0.6%  |
| White male      | 34,404      | 90.3% | 31,795            | 90.5% |
| Total           | 38,105      |       | 35,124            |       |

So, on initial examination, 9.9% of all firms in the six county area covered by the Ordinance in the database are owned by MWBEs in construction. This seems very low. Indeed, it is considerably lower than the proportion of firms that are owned by women and minorities in the (Table 51) in Chicago-Naperville-Joliet, IL-IN-WI MSA construction from Survey of Business Owners, 2002 which was as follows

|                         |       |
|-------------------------|-------|
| Female-owned            | 9.2%  |
| Hispanic or Latino      | 6.0%  |
| Black                   | 3.4%  |
| American Indian         | 0.4%  |
| Asian                   | 1.0%  |
| Total MWBE availability | 20.0% |

It turns out that there is a major problem with the racial classification for the smallest firms, which does not seem to have been noticed before. The consequence of this problem suggests that this is a *considerable undercount of the true proportion* of MWBEs in the D&B database.<sup>73</sup> This is illustrated below for construction firms only in all areas (SIC 15, 16 & 17): here the mean is 9.5% as we have excluded all the MWBEs from the various other sources, hence the lower count.

|             |       |                      |       |
|-------------|-------|----------------------|-------|
| 0 employees | 7.0%  | 8 employees          | 16.7% |
| 1 employees | 4.0%  | 9 employees          | 11.0% |
| 2 employees | 5.8%  | 10 employees         | 17.0% |
| 3 employees | 8.5%  | =10 & <50 employees  | 17.3% |
| 4 employees | 13.0% | =50 & <100 employees | 16.3% |
| 5 employees | 13.3% | =100 employees       | 7.9%  |
| 6 employees | 12.8% | All                  | 9.5%  |
| 7 employees | 14.8% |                      |       |

There is an obvious problem here for the firms with less than four employees because the percent MWBE seems too low, averaging 7.4%. There is every reason to believe that the

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<sup>73</sup> Of course this is not a problem with the firms I have added from the various lists of MWBEs and DBEs as they are all MWBEs and all have employment size missing.

proportion of firms owned by MWBEs would likely be higher, not lower, the smaller is the size of firm. Supportive of this is the evidence from **Table 30** in 2007/8 where 22.6% of the self-employed in Chicago construction were women or minorities. The majority of the self-employed - especially the unincorporated - will have less than four employees. Note that we do not have the number of employees for firms we have added to the database from the lists of certified MWBEs/DBEs, unless they were already on the D&B file.

This is consistent with the evidence presented by Mach and Wolken (2006). They found that the sample for the 2003 Survey of Small Business Finances that was drawn from the Dun and Bradstreet Market Identifier files (DMI), in comparison with the Survey of Business Owners did not appear to pick up many minority-owned firms. In part this may be because the Dun and Bradstreet file is not as good at picking up the newest and smallest firms compared with the SBO. Second, the DMI extends the time the firm had to be in business to get in the survey so this drops the youngest firms which likely are disproportionately owned by minorities.

Other evidence consistent with the view that the D&B file underestimates the proportion of firms that are owned by MWBEs can be seen from the Chicago Credit Market Survey discussed above. Out of the 400 cases we sampled 297 were not classified as being owned by MWBEs. We sampled them again and queried their ownership status. Of these 297 firms that were unclassified in actual fact on further investigation 27.3% were in fact owned by MWBEs in the following proportions.

|                         |              |
|-------------------------|--------------|
| African American        | 7 (2.36%)    |
| Hispanic                | 19 (6.40%)   |
| Asian/Pacific islanders | 7 (2.36%)    |
| Native American         | 6 (2.02%)    |
| White female            | 42 (14.14%)  |
| White male              | 216 (72.73%) |

It is not that D&B classify the ownership status of the firms incorrectly. Rather they do not classify them at all. Simply because the firm is not classified by D&B as an MWBE does not mean it is owned by a white male. The ownership status of such firms is then *unclassified* rather than wrongly classified. We need to do something about this if we are to adequately calculate availability.

One reasonable solution is for those firms with less than four employees to be given the self-employment rate of 22.6% as above, consistent with the self-employment rates for white women and minorities in Chicago construction shown in **Table 30**. That is each individual is assumed to be .226 of an MWBE. That way the overall MWBE rate in construction would then rise from 9.4% to **24.7% overall and 25.1% in the six-county area**. What would that imply for the distribution by race? Using the percent self-employed in Chicago construction from **Table 30** again, the availability by race in construction would be as follows:-

|             |       |
|-------------|-------|
| White males | 74.9% |
|-------------|-------|



|               |       |
|---------------|-------|
| White females | 11.8% |
| Blacks        | 4.2%  |
| Asians        | 2.1%  |
| Hispanics     | 6.9%  |
| Natives       | 0.1%  |

This then implies availability of MWBEs of 25.1% as follows by the three main 2-digit SIC construction codes.

|  |                      |
|--|----------------------|
| 15. Building construction-general contractors and operative builders | 24.2% (23.9%)        |
| 16. Heavy construction other than building construction-contractors  | 23.5% (23.3%)        |
| 17. Construction-special trade contractors                           | 25.7% (25.2%)        |
| <b>15, 16 &amp; 17. Construction</b>                                 | <b>25.1% (24.7%)</b> |

The estimate in parentheses include the additional five counties. Hence the availability rate would be only slightly lower if the program was expanded to include larger area although it would bring more MWBE firms into the available pool that could be tapped by the Procurement Department.

This is our starting point for the setting of goals.

### 11. Goal percentages and utilization of minorities

Closed out City contracts totaling nearly \$471 million were examined to determine how the City was spending its money. A sample of 35 contracts were examined associated with City of Chicago MWBE construction contractors. Firms owned by MWBEs were contracted to receive \$143,768,283 of work under these thirty five contracts.

Data were obtained from the three largest City departments for construction: Department of Transportation; Department of General Services and Department of Water Management. The data relate to the three fiscal years 2006-2008. These thirty-five contracts were limited to those that were funded *entirely* by the City of Chicago and not projects funded in whole or part by federal funds. Hence they did not have any DBE goals on them but all had MWBE goals.

#### 1) Department of Transportation

The fifteen contracts totaled **\$74,376,303** and made use of thirty-two subcontractors who were contracted to receive \$23,671,652 in payments. Of the fifteen contracts four were for less than \$3 million. Overall firms owned by MWBEs were awarded 31.8% of contract dollars, which was higher than the set goals. The contracts with percentage goals are listed below.

| Contract #  | Contract Award | MWBE amount | MBE | WBE |
|-------------|----------------|-------------|-----|-----|
| <i>2006</i> |                |             |     |     |
| 1. 12746    | \$3,139,343    | \$889,475   | 24  | 4   |
| 2. 10982    | \$2,765,338    | \$777,245   | 24  | 4   |

|                     |                     |                             |    |    |
|---------------------|---------------------|-----------------------------|----|----|
| 3. 12961            | \$11,301,706        | \$3,449,349                 | 26 | 4  |
| 4. 13428            | \$7,422,000         | \$2,095,540                 | 24 | 4  |
| 5. 13282            | \$3,507,756         | \$998,571                   | 24 | 4  |
| <i>All 2006</i>     | <i>\$28,136,143</i> | <i>\$8,210,180 (28%)</i>    |    |    |
| <i>2007</i>         |                     |                             |    |    |
| 1. 15339            | \$4,192,121         | \$1,585,806                 | 31 | 7  |
| 2. 14730            | \$3,272,129         | \$918,181                   | 24 | 4  |
| 3. 15260            | \$2,056,471         | \$577,180                   | 24 | 4  |
| 4. 14208            | \$2,681,988         | \$1,543,192                 | 53 | 4  |
| 5. 15092            | \$1,398,954         | \$471,307                   | 30 | 4  |
| <i>All 2007</i>     | <i>\$13,601,663</i> | <i>\$5,095,666 (37.5%)</i>  |    |    |
| <i>2008</i>         |                     |                             |    |    |
| 1. 18255            | \$9,300,835         | \$2,589,325                 | 27 | 4  |
| 2. 17640            | \$8,160,579         | \$2,399,742                 | 25 | 4  |
| 3. 17422            | \$7,990,162         | \$2,238,820                 | 24 | 4  |
| 4. 17738            | \$3,799,769         | \$1,796,945                 | 39 | 9  |
| 5. 16563            | \$3,387,152         | \$1,340,981                 | 28 | 12 |
| <i>All 2008</i>     | <i>\$32,638,497</i> | <i>\$10,365,813 (31.8%)</i> |    |    |
| <b>Total 2006-8</b> | <b>\$74,376,303</b> | <b>\$23,671,659 (31.8%)</b> |    |    |

## 2) Department of Water Management

Of the fifteen contracts examined here the total covered was **\$384,325,258**, with more than half in 2008. Thirty-three MWBE subcontractors were contracted to receive a total of nearly \$116 million with an overall MWBE participation rate of 30.2%. The details by individual contract with percentage goals are set out below.

| Contract #        | Contract Award       | MWBE amount                 | MBE | WBE |
|-------------------|----------------------|-----------------------------|-----|-----|
| <i>2006</i>       |                      |                             |     |     |
| 1. 13031          | \$12,254,270         | \$3,445,000                 | 24  | 4   |
| 2. 12478          | \$3,400,000          | \$733,778                   | 17  | 4   |
| 3. 12479          | \$1,498,888          | \$419,689                   | 24  | 4   |
| 4. 11177          | \$4,485,500          | \$1,258,612                 | 24  | 4   |
| 5. 11187          | \$1,225,800          | \$244,795                   | 16  | 4   |
| <i>Total 2006</i> | <i>\$22,864,458</i>  | <i>\$6,101,874 (26.7%)</i>  |     |     |
| <i>2007</i>       |                      |                             |     |     |
| 1. 14285          | \$67,600,000         | \$27,716,000                | 32  | 9   |
| 2. 13288          | \$26,017,500         | \$7,300,650                 | 24  | 4   |
| 3. 13289          | \$25,227,500         | \$7,070,250                 | 24  | 4   |
| 4. 13286          | \$25,136,000         | \$7,049,250                 | 24  | 4   |
| 5. 12195          | \$19,193,787         | \$5,734,261                 | 24  | 4   |
| <i>Total 2007</i> | <i>\$163,174,787</i> | <i>\$54,870,411 (33.6%)</i> |     |     |
| <i>2008</i>       |                      |                             |     |     |
| 1. 16760          | \$45,958,630         | \$13,001,850                | 24  | 4   |
| 2. 16764          | \$41,768,625         | \$11,093,950                | 24  | 4   |
| 3. 16763          | \$39,921,575         | \$11,179,460                | 24  | 4   |
| 4. 16708          | \$36,188,888         | \$10,264,633                | 24  | 4   |

|                     |                      |                              |    |   |
|---------------------|----------------------|------------------------------|----|---|
| 5. 16669            | \$34,448,295         | \$9,473,046                  | 24 | 4 |
| <i>Total 2008</i>   | <i>\$198,286,013</i> | <i>\$55,012,939 (27.7%)</i>  |    |   |
| <b>Total 2006-8</b> | <b>\$384,325,258</b> | <b>\$115,985,224 (30.2%)</b> |    |   |

3) *Department of General Services*

Of the five contracts examined here the total covered was **\$12,059,431** of which MWBE subcontractors were contracted to receive a total of \$4,108,400 with an MWBE participation rate of 34.1%. The contracts with percentage goals are listed below.

| Contract #   | Contract Award      | MWBE amount                | MBE | WBE |
|--------------|---------------------|----------------------------|-----|-----|
| 1. JB5029    | \$2,107,305         | \$337,811                  | 1%  | 15% |
| 2. JB5022    | \$3,192,440         | \$399,100                  | 8%  | 5%  |
| 3. JTP655    | \$1,583,279         | \$586,688                  | 17% | 10% |
| 4. FHP004    | \$3,498,738         | \$2,626,761                | 69% | 0%  |
| 5. WIC002    | \$1,677,670         | \$161,040                  | 8%  | 0%  |
| <b>Total</b> | <b>\$12,059,432</b> | <b>\$4,111,400 (34.1%)</b> |     |     |

Of the contracts we examined, over the years 2006-2008 the DGS had an MWBE percentage of 34%; the Department of Transport, 32% and the Water Department 30%.

We also examined these contracts to determine SIC codes so that we could determine the sectoral weights of the City's construction spending. They were distributed as follows across ten codes. We also present the availability rate for each of these SIC codes.

|  | % dollars | Availability rate |
|--|-----------|-------------------|
| 1541 General Building Contractors - Industrial   | 1.33%     | 22.5%             |
| 1611 Highway & Street Construction Contractors   | 10.60%    | 23.8%             |
| 1623 Water, Sewer, & Utility Contractors         | 28.70%    | 25.0%             |
| 1629 Heavy Construction Contractors, Misc.       | 0.04%     | 19.7%             |
| 1721 Painting Contractors                        | 0.85%     | 26.5%             |
| 1731 Electrical Contractors                      | 4.22%     | 28.4%             |
| 1741 Masonry Contractors                         | 28.36%    | 23.2%             |
| 1796 Building Equipment Installation Contractors | 0.03%     | 32.9%             |
| 1799 Specialty Trade Contractors, Misc.          | 7.87%     | 34.8%             |
| 1794 Excavation                                  | 18.02%    | 22.0%             |

Imposing these weights gives an overall availability estimate of 24.7% for the six county area, little changed from 25.1% estimated above.

It turns out that it is very challenging to determine the exact SIC codes that the subcontractor should be classified into. Exhibit C contains the full list of SIC codes. It is especially hard when prime contractors self-perform particular activities. The fact that self-performing is prevalent was made quite clear to me during the BAGC trial. It is thus difficult to determine what weight to allocate to general construction categories such as 1541. There is also reason to believe that firms can switch between various SICs at will -

they could be working on single family homes one week and industrial buildings or roads the next. Indeed, the sector a firm is working in may be the result of discrimination itself. A firm would like to work in one activity and is unable to do so because of discrimination and is forced to undertake less profitable work. Removal of the discrimination would allow the firm to move sectors.

It is also likely that the types of projects built in one time period will be markedly different from those in the next. It is clear from the data that there is considerable variation in the types of project done by each department by year and also a big difference in the amount spent each year. Hence, it seems appropriate to use the unweighted estimate of 25% as the overall availability rate of MWBEs above, not least because of the similarity of the estimates. This decision to use the unweighted data will have only small, and likely statistically insignificant effects on the results. There is no necessity to weight, in my view, for reasons outlined above.

## **11. Conclusions and proposals**

Fairlie and Robb (2008) conclude about the success rates of various racial groups.

"A clear ordering of business success exists across racial groups in the United States. Whites and Asians have the highest rates of business ownership and own the most successful businesses. Among all businesses, white firms generally outperform Asian firms slightly; however, after removing small-scale and side businesses, Asian firms outperform white firms. Estimates from 1992 CBO microdata indicate that Asian-owned firms are 16.9 percent less likely to close, 20.6 percent more likely to have profits of at least \$10,000, and 27.2 percent more likely to hire employees than white-owned firms. Furthermore, they have mean annual sales that are roughly 60 percent higher than the mean sales of white-owned firms.

African American firms have the lowest rates of business ownership and the worst outcomes of all major ethnic and racial groups. The low rate of business ownership among blacks relative to whites—approximately one third the rate—held for most of the twentieth century. In the past few years, however, there is some evidence of rising black self-employment rates. Estimates from the SBO, SMOBE, and CBO also indicate that black-owned firms have substantially worse outcomes than white- and Asian-owned firms. Black-owned firms have lower revenues and profits, hire fewer employees, and are more likely to close than white- and Asian-owned businesses.

Finally, Latinos have the second lowest rate of business ownership of the four major ethnic and racial groups. Their rate of business ownership is only two thirds the rate of business ownership among white non-Latinos. Estimates from the SBO/SMOBE data also indicate substantially worse outcomes among Latino-owned firms than white- or Asian-owned firms.

Latino-owned businesses have lower average sales, are less likely to hire employees, and hire fewer employees than white-owned businesses. Unexpectedly, however, estimates from our CBO sample do not reveal large disparities in business outcomes for Latino-owned firms. We find very similar rates of closure, profits, employment, and mean log sales. The lack of large disparities between white and Latino firms, however, appears to be peculiar to the CBO. Estimates from other sources, such as the SSBF and U.S. Census, in addition to the SBO/SMOBE indicate that Latino-owned businesses have worse average outcomes than white-owned businesses." (2008, chapter 2).

This is the background around which we need to work. We should caution, however, that a good deal, although not all, of the evidence used by Fairlie and Robb is based on very old data drawn from the CBO of 1992. However, many of their conclusions are apposite today. The evidence is that rates of business ownership are especially low, and discrimination high, especially in the credit market, among African Americans and Hispanics. There is considerably less supporting evidence for Asians and white women and for other racial groups including Native Americans, Arab Americans or others.

The main backdrop to this discussion is the very serious recession that is hitting the US economy, which has hit construction and minorities especially hard. The construction industry lost 126,000 jobs in March 2009 alone, with declines occurring throughout the industry. Employment in construction has fallen by 1.3 million since peaking in January 2007; nearly half of that decline occurred over the last 5 months. In March, employment fell in specialty trade contractors (-83,000) and construction of buildings (-33,000). These declines were split about evenly between the residential and nonresidential portions of these industries.<sup>74</sup> Unemployment rates of both African Americans are now both in double digits (13.3% and 11.4% respectively). In contrast, unemployment rates of Asians are currently lower than they are for whites (6.4% and 7.9% respectively). The unemployment rate of construction and occupations is up from 12.0% in March 2008 to 21.1% in March 2009. At this time public spending is likely to be the life blood of many small businesses who would struggle to survive on the slim pickings available from private sector work. For many small construction firms that is especially likely to be true given that the home building sector is in deep recession. Excluding a group from the program or reducing the goals at this time might well be fatal for many small businesses who need the work provided by the City's MWBE program. I am mindful of this evidence when making my recommendations below.

My first conclusion is that, in my view, there remains a basis in the evidence to justify the existence of a goals program. This evidence suggests that discrimination continues to exist in the Chicago construction market. It is exacerbated by discrimination in the credit market that acts as a market failure, which means this discrimination persists. Firms owned by minorities, and to a lesser degree ones owned by white women are unable to obtain loans when they apply for them, even with the same characteristics as white men.

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<sup>74</sup> 'The Employment Situation, March 2009', released April 3<sup>rd</sup> 2009, BLS.

When they do get them they have to pay higher interest rates. When banks do not know the race of the owner, there is no difference suggesting this is not due to omitted variable biases, but rather to discrimination. The City of Chicago in my view is then justified in maintaining its goals program.

There is **no evidence** that I have seen that suggests that, in comparison with my earlier reports to the City, the observed discrimination has diminished over time. The onset of a severe recession, which traditionally hits the weakest hardest through last-in-first-out rules etc. suggests that the need for this program is likely to be even greater than is the case in good times. There are grounds then for considering *increasing the size of the goals*, at least temporarily until the recession is over and banks start lending again. I consider these various arguments in some detail below. It is appropriate to consider the size of the goals; who gets in and whether or not there should be sub-goals. There is also a case that Asians should be removed from the program, as they appear to actually out-perform firms owned by white men. I consider all of these arguments below.

City procurement policies cannot directly lower barriers to MBEs and WBEs in specific sectors like construction unless MBEs and WBEs are operating in these sectors. The concept of encouraging new entrants into the applicable MBE, WBE populations by adopting preferential-procurement policies lowering barriers to such entrants (sometimes referred to in “but for” terms) has been rejected by the handful of courts that have considered this issue: firms cannot be available if they do not exist. Thus, an availability calculation of the kind we did above is the starting point necessarily entails looking first at existing Chicago-area MBEs and WBEs.

How many area *firms* are ready and willing to sell to the City of Chicago? Existing evidence, going all the way back to the 1990 report of the Blue Ribbon Panel (Getzendanner et al., 1990) indicates that MBEs and WBEs are overrepresented among area firms ready and willing to sell their products to the City of Chicago and other public entities (Bates, 2002b). As a purely illustrative example, MBEs could be ten percent of the area construction firms overall, but 30 percent of the construction firms indicating a willingness to sell to the City, as demonstrated by a concrete act like signing up on the applicable City vendor list.

As noted above, ready and willing traits are determined by the firm owner; “able” is determined by the client. Available information indicates that MBEs and WBEs – overrepresented among the ready and willing – are also overrepresented among the able, but more comprehensive information needs to be collected by the procurement department. Asking prime contractors to perform this information-gathering function for subs is not a solution to the problem. If subs were paid by the City directly, then there would be much less ambiguity about which firms got what. This approach would also facilitate making quick-pay policies beneficial to minority subs.

As a starting point we make use of the following data for availability with an overall rate of 25.1%.

|               |        |
|---------------|--------|
| White males   | 74.9%  |
| White females | 11.8%; |
| Blacks        | 4.2%;  |
| Asians        | 2.1%;  |
| Hispanics     | 6.9%   |
| Natives       | 0.1%   |

Over the last few years the courts have either permanently or temporarily halted programs that benefited Minority and Women-owned Business Enterprises (MWBEs) in many jurisdictions across the United States. In some cases the programs have started up again when the injunctions were lifted or a new program instituted. This provides an opportunity to examine what happened to utilization of such firms when the program is removed. This is a good way to get at the scale of the impact of the programs. As documented in Blanchflower and Wainwright (2005) the effect was devastating – utilization dropped to zero in at least one case.

In 2002 the County of Cook's sub-contractor goals program in construction was struck down.<sup>75</sup> Prior to the entry of the injunction the Cook County ordinance set – and apparently met - sub-contractor goals for MBEs of 30 percent and for WBEs of an additional 10 percent making 40 percent in all. In a subsequent case involving the same plaintiff, evidence was presented at trial from Cook County on the utilization of minority and women-owned firms.<sup>76</sup> When contracts relating to medical equipment and supplies were omitted and restricting the analysis to contracts involving 'dirt' upon examining contracts awarded by Cook County post-litigation in 2001 and thereafter it was found that MBE utilization had fallen dramatically. Out of a total of \$50,415,215.49 in contract dollars spent, \$19,257,851.40 was for equipment and furniture and was removed from the calculations.<sup>77</sup> This leaves \$31,157,364.09 of which \$3,874,250.01 went to MBEs (12.43 percent) and \$1,201,048.97 went to WBEs (3.85 percent). Overall then \$5,075,298.98 out of \$31,157,107.21 went to MWBEs (16.29 percent).

This was a dramatic drop from the pre-injunction levels at a time when these contractors were likely aware that they were under scrutiny and likely to be on their best behavior as they were plaintiffs in ongoing litigation on the same issue with an overlapping jurisdiction. Holt (2006) has updated this analysis using data on Cook County contracts. It is unclear from the paper though, on precisely which contracts are included, and whether they are closed-out contracts. Further, Holt does not make clear how the MBE or WBE status of the firms was determined, given that the County had no MWBE program in place and certainly no certification procedure. Holt (2006) presented

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<sup>75</sup> Builders Association of Greater Chicago vs. County of Cook, in the U.S. District Court for the Northern District of Illinois Eastern Division, Case # 96 c 1121, November 2, 2000, Decided

<sup>76</sup> Builders Association of Greater Chicago vs. City of Chicago in the U.S. District Court for the Northern District of Illinois Eastern Division, Case No. 96 C, 1122, December 29<sup>th</sup> 2003, Decided.

<sup>77</sup> Source: BAGC vs City of Chicago Plaintiff's Trial Exhibit #811

evidence on both prime and subcontracting dollars awarded from 12/01/2003 to 7/25/2005 and concluded that, “the drop-off for construction was immediate and drastic” (2006, p.39).

*Q1. Who should get into the program?*

In this paper I have identified widespread evidence that minorities and women have lower self-employment rates; lower ownership rates of businesses, lower earnings and fewer weeks and hours of work than white males. I presented evidence for the US as a whole; for Chicago; for construction and where feasible given sample size constraints, for Chicago-Naperville-Joliet Metropolitan Division construction. Evidence was also presented of widespread discrimination against minorities and to a lesser degree, for white women. Relevant to the goal setting process would have to be what is the quantitative evidence by racial group? Of course, the qualitative evidence is relevant but is not considered here.

The evidence for the inclusion on the program of both Asians (-23) and white women (-28) is not as strong as for Hispanics or especially blacks but is it strong enough to include them in the program? The question I must then turn to is, based on the evidence, which other groups, if any, should also be covered by the program? I then turn, finally to the question of how large the goals should be. I end with a number of recommendations.

*Q2. Should white females, Asians and ‘Other Races’ be in the program?*

Let us examine the arguments in turn.

**a) White females**

There is a concern regarding the inclusion of white females in the program, not least because of the fact that we find evidence that the probability of being self-employed for white females in Chicago construction in the most recent data available in Table 32 *is not significantly different from the rate for white males*. Moreover, there is only limited evidence from the credit market that white females have higher denial probabilities or pay higher interest rates than white males.

There is an argument to include white females in the program because of evidence that, holding constant characteristics, they have significantly lower self-employment earnings than white men. The evidence from the unincorporated self-employed equations does suggest that white females have lower rates than white males, holding constant characteristics. There is also some evidence that they are discriminated against in the capital market. There is also anecdotal evidence of such discrimination, including a number of white female owners of WBEs in the BAGC case who documented discrimination against them, as well as evidence from Aparicio (2009b), which suggests that one reason women owners have improved is the existence of the program. A quote from a women business owner illustrates:

"I talked with one of their guys one time, especially when I started the second company with the steel and everything -- and they have their own ironworkers and so I understand all that. And the guy told me, he says ma'am, he says I have never had a woman working on my job, he says, as



long as I've been in business, he goes. And I'll close my doors before I ever have a woman contractor working for me. Okay, thank you. Well, probably six months, maybe a year later he's got a job not far from my office. He went in for a waiver. IDOT is like no. You've got -- per dollar you can use [Company A] for either the steel or the concrete; call her. They didn't want to lose the job because they were going to yank it from them for not meeting their DBE goal. So all of a sudden -- now this same guy calls, and I'm talking to him."

One possibility is that the rise in the self-employment rate of women, and especially in the incorporated rate, has arisen to take advantage of the various set-aside programs that exist in construction. The possibility then is that what we are observing is that firms owned by white males are bringing their spouses into the business to take advantage of the programs. Who are these women? In the 2000 Census Blanchflower and Wainwright (2005) found that there are 3,950 white female incorporated business owners whose status was not imputed. Of these 86% were married compared with 63% of all white female workers in the construction sector and 68% of white female unincorporated self-employed in the sector. In terms of family types 71% of the white female incorporated self-employed were a married couple where both the husband and wife were in the labor force compared with 51% for all white females in construction and 48% of the unincorporated self-employed white females.

Blanchflower and Wainwright (2005) also examined the occupational mix of both the incorporated and unincorporated self-employed in construction once again using data from the 2000 Census. They omitted any case where the class of worker was imputed. White females who are *incorporated self-employed* are more likely to be in bookkeeping and accounting and especially likely to be secretaries or administrative assistants. 43% of white females who were incorporated self-employed were bookkeepers, secretaries or administrative assistants compared with 0.2% of white men and 23% of minority women. There is much less difference in the occupation distribution for the unincorporated self-employed between white women and minority women than is the case for the incorporated self-employed. One possibility then is that what is going on here is that some white females are 'fronting' firms that are actually being run by their white male spouses. They are doing so to take advantage of the benefits of the affirmative action programs. A number of prosecutions around the country have occurred because contracts were fraudulently obtained by companies that were 'fronted' by individuals claiming to be socially or economically disadvantaged but who were not true owners of the firm, so this is a real concern.

If white females are to be included in the program they should be subject to accreditation procedures to ensure that they are not simply passive participants in the firm, fronting for white males. It would not be appropriate to limit participation say to unincorporated self-employed only and to exclude those white women who were incorporated self-employed, as this is just a legal status that could be altered in response to any such policy change which would achieve nothing. I am aware that the City has been extremely active in instituting debarment proceedings against contractors who the City believes do not

belong in the MWBE program i.e. because the entity is a sham or a front. Such vigilance is crucial to ensure that the program only impacts those who it is intended to cover because they are disadvantaged.

I would recommend that white women continue to be included in the program. The evidence is somewhat weak hence I would maintain the availability percentage for white women at the 4% in the current ordinance.

#### **b) Asians**

What then is the argument to include Asians? The arguments against including them are somewhat stronger than at the time of my interim review. In particular there is the evidence provided by Fairlie and Robb (2008) that firms owned by Asians typically outperform those owned by whites. Moreover, as I noted above, the Asian unemployment rate tends to be lower than the white rate.

Gottschalk (2008) has presented evidence recently suggesting that Asia/Pacific Islanders have markedly higher net worth than other racial and ethnic groups. In 2002, households with non-Hispanic White householders had a median net worth of \$87,056; those with Black householders, \$5,446; those with Asian or Pacific Islander householders, \$59,292; and those with Hispanic householders, \$7,950. Non-Hispanic White households in every income quintile had higher levels of median net worth than their Black, Asian or Pacific Islander, and Hispanic counterparts ([Table 52](#)).

[Table 53](#) shows that in the lowest quintile in 2002, the median net worth for non-Hispanic White households was \$21,558; for Asian or Pacific Islander households, \$1,600; and for Hispanic households, \$1,229; the corresponding figures for the highest quintile were \$210,298 for non-Hispanic White households, \$61,000 for Black households, \$195,461 for Asian or Pacific Islander households, and \$80,600 for Hispanic households. Between 2000 and 2002, the median net worth of non-Hispanic White householders increased by almost \$1,900, while the median net worth of Black householders and Hispanic householders decreased approximately \$2,500.

As [Table 53](#) illustrates, Black households and Hispanic households held a higher proportion of their net worth in durable goods, such as housing and vehicles, than did their non-Hispanic White and Asian or Pacific Islander counterparts. Black and Hispanic households had a lower proportion in financial assets such as stocks and mutual fund shares than did non-Hispanic White households and Asian or Pacific Islander households. The percentage of net worth in IRA and Keogh accounts was higher for non-Hispanic White households compared with Black, Asian or Pacific Islander, and Hispanic households.

In Blanchflower (2007b) I argued that Asians should be included in the program.

"The arguments against including them are the same as when the substitute ordinance was implemented. There is only limited evidence that in Chicago construction in comparison to white males, that Asians have

significantly lower self-employment probabilities, self-employment earnings or weeks or hours worked. There is some evidence that they do have higher loan denial rates but no evidence that they pay higher interest rates. There is evidence that the average sales of construction firms, owned by Asians, has declined, although the number of such firms has increased.

....Moreover, there is also evidence to suggest that where there are significant negative effects for Asians they are markedly smaller than for Blacks or Hispanics. There is also some evidence from the 2003 SSBF that Asians have significantly higher loan denials although this becomes statistically insignificant once the age of the firm is controlled for. There is also evidence that Asian-owned firms pay higher interest rates. In addition, Asian owners are particularly likely to report their main problem is with financing and interest rates.

....There is a good deal of new evidence on how Asian-owned businesses have fared since the review that was taken after Judge Moran's decision where he opined that there was insufficient evidence to include Asians in the program. There is quantitative evidence – especially from the credit market and on unemployment and wages, plus anecdotal evidence of discrimination that is stronger than it was in 2004 which convinces me that there is now enough evidence to suggest that Asian-owned firms be brought back into the program. I would review that decision in the light of the new data that emerges between now and the full review in 2009, especially if the residential housing market fails to recover quickly."

These arguments remain valid. The evidence for including Asians, it should be said is considerably weaker than for Hispanics and African-Americans. However, the onset of this recession of such a magnitude is likely to make things much worse for Asian-owned firms to survive in the Chicago construction industry. This is not the time to remove them from the program. I would recommend revisiting this question once the recession is over.

**c) Other racial groups.**

There is some evidence that other racial groups have significantly worse outcomes than white men. Clearly this is a catch-all category and hard to track – it includes American Indians and people who report multiple races. In many cases there are too few observations to specifically identify statistically evidence of discrimination against any single category. The difficulty if one extended the program to a catch-all category is that it would be over-inclusive. My recommendation would be to exclude the *Other Race* category from the Ordinance. An individual business owner from one of these racial groups could become covered by the ordinance if they filed an affidavit with the City testifying to the fact that they had been discriminated against and were 'socially disadvantaged by suffering racial or ethnic prejudice or cultural bias within American society, without regard to individual qualities, resulting in decreased opportunities to

compete in Chicago area markets or do business with the city' (Substitute ordinance, 2004, p.6). These difficulties do not arise for Native Americans who are an identifiable group. Where there are sufficient observations to obtain a large enough sample there is evidence that they have worse outcomes than white males nationally as well as in construction (i.e. Tables 27, 28, 30, 33, 37, 38, and 39). This evidence is stronger than it was in the past and I am now persuaded that it would be apposite at this time to add Native Americans to the program. There is no statistical evidence, or any available data, from which statistical conclusions could be drawn, to support the inclusion of any other racial or ethnic groups.

*Q3. Should there be any 'but-for' adjustments and if so who should they cover?*

Is any upward adjustment – an interim adjustment, perhaps – possible at this point? The ultimate question here of course is whether it is legally feasible to do such adjustments. This is a matter for lawyers rather than for an economist. I proceed from here on the assumption that it is constitutional to do so.

*a) Importance of public sector work for women and minority-owned firms*

One possible re-weighting of the data arises because of the importance of public sector work to MWBEs and derives particularly from the work of Tim Bates. This method was previously used, for example, in Blanchflower (2006) and Bates (2006). An upward re-weighting is most obviously appropriate for blacks and Hispanics, more actively pursue government procurement business than non-minority-owned firms; hence, they are more available than similarly situated non-minorities, based upon two pieces of evidence. First, a 1993 U.S. Department of Commerce study of small firms selling products to state and local government supports upward re-weighting (Bates, 1993). Second, regression analysis evidence delineating firms selling to government from firms not selling to government supports upward re-weighting, and this evidence provides a precise re-weighting mechanism (Bates, 2002b; Bates, 1998; Bates, 2001). Both the 1993 U.S. Department of Commerce study and the applicable regression analysis evidence are already on the record in the BAGC v. Chicago case.

The U.S. Department of Commerce study examined very large, representative samples of firms that sold products to state and local government clients, focusing explicitly upon firms operating in the nation's 15 largest metropolitan areas. In these metro areas, 13.9 percent of the MBEs and 9.6 percent of the non-minority-owned small firms sold products to state and local government clients. In the Chicago metro area specifically, this study documented that 17.1 percent of the region's MBEs and 4.4 percent of the non-minority firms sold products to this client group (Bates, 1993, Table 15). Thus, MBEs were clearly more available (ready, willing and able) to serve government clients than non-minorities. Further, looking solely at the Chicago-area firms selling to government, MBEs were more heavily oriented to their government clients – deriving 25.2 percent of their annual sales (on average) – than non-minorities (16.9 percent of their sales were from government clients) see (Bates, 1993, Table 16).

The second piece of evidence of greater MBE availability was derived from Bates' 1998 analyses documenting that MBEs faced greater barriers than white male-owned firms

when they attempted to sell their products to other businesses (Bates, 1998). The resistance lessening their penetration of the private-business marketplace encouraged MBEs to sell to government clients, since they were less likely to be disadvantaged, relative to non-minorities, in the government marketplace. Regression analysis was used to address the following question: controlling statistically for firm traits, such as industry of operation, are MBEs more or less likely than non-minority-owned firms to sell to government clients? Answer: MBEs owned by blacks and Hispanics were more likely to sell to government than similarly situated non-minorities, and this greater orientation to a government clientele was statistically significant. Utilizing the regression coefficient of the MBE explanatory variable to estimate the magnitude of greater MBE availability to sell to government, MBEs were found to be 11.3 percent more likely than similarly situated whites to sell to government. This 11.3 percent empirical measure provides a concrete basis for the upward weighting of MBE availability. Thus, *blacks* and *Hispanics* in the construction sector are more available, on a firm-by-firm basis, than non-minorities: the barriers they face in the private marketplace encourage them to pursue government contracting opportunities more aggressively than similarly situated non-minority firms (Bates, April 2002; Bates, 1998). The logic in supporting an interim upward re-weighting is that comprehensive procurement data, in conjunction with existing evidence briefly described above, support at least an 11.3 percent upward weighting of the aspirational goal for blacks and Hispanics. Note that the evidence cited above referred to MBEs; it does not support re-weighting in the case of firms owned by white women. Applying this to self-employed headcount data above means that blacks and Hispanics, would have their availability set at 4.7% and 6.9% times 1.113, or 4.7% and 7.7% respectively for construction. I have also added a goal of 0.1% for Native Americans for reasons outlined above.

*Availability after adjustment #1 multiplying by 1.113 for blacks and Hispanics and setting white female goal to 4.0%.*

|                         |       |
|-------------------------|-------|
| White females           | 4.0%  |
| Blacks                  | 4.7%  |
| Asians                  | 2.1%  |
| Hispanics               | 7.7%  |
| Natives                 | 0.1%  |
| Total WBE availability  | 4.0%  |
| Total MBE availability  | 14.6% |
| Total MWBE availability | 18.6% |

*b) Self-employment would have been higher 'but-for' discrimination*

The self-employment rate in construction of blacks and Hispanics would likely have been higher 'but-for' discrimination. The evidence is overwhelming in the case of blacks that there is widespread statistical evidence of discrimination against them whichever dependent variable or sample is examined. The evidence is even stronger when one examines the size of the various black coefficients (see, for example [Tables 41-46](#)). It

then seems reasonable to make one additional step and that is to conduct a 'but for' analysis to adjust upward the self-employment rates of blacks only.<sup>78</sup>

The evidence that Hispanic-owned firms should be in the but-for analysis is not as strong as for blacks but is still substantial, particularly in terms of the evidence from the credit market and the generally large measured effects I have presented throughout this report. There is much less powerful argument that the 'but-for' analysis be conducted for any other group. I do not do a 'but-for' adjustment for white women or Asians because their coefficients are insignificant in column 1 (1996-2006) or in column 4 of Table 31 (2001-2006), in the most recently available estimates, for Chicago construction.<sup>79</sup> This analysis for blacks is conducted to account for the additional availability that would have been present but for discrimination. I conduct this but-for analysis for blacks and Hispanics who are the most obviously discriminated against.

How can this be done? My solution is to examine the self-employment equation for Chicago construction in **Table 35** and use that to determine what the self-employment rate of blacks and Hispanics would have been in the absence of discrimination. Implied goals are taken by dividing the coefficient by the mean and adding one and multiplying the black and Hispanic rates after the 1<sup>st</sup> stage adjustment (4.5% and 6.7% respectively). The means are taken from Row 6 of Table 30 which were Blacks=10.9% and Hispanics=5.6%. The coefficients were .1136 for Blacks and .1274 for Hispanics. For blacks the multiplicative factor is  $11.36/10.9=1.04$  and for Hispanics the multiplicative factor is  $12.74/5.6=2.275$ . These are large 'but-for' adjustments to be added to the goals reported as step one above of 4.7% for blacks and 7.7% for Hispanics. Given the onset of recession and the impact that is likely to have going forward on the survival of existing MWBE firms and the birth of new firms these 'but-fors' seem too large. Hence it seems appropriate to be conservative, hence in the current climate it seems appropriate to halve the multiplicative factor. Hence, I use .5 for blacks and 1.13 for Hispanics.

*a) African-American owned firms*

The starting point for the calculations for African-American owned firms is the 4.7% availability estimate after adjustment #1. Once the 'but-for' calculation is applied then this suggests a new goal of 7%. This number is clearly low in relation to the proportion of African-Americans in the resident population of the City of Chicago and the CNJ

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<sup>78</sup> The US Department of Transportation explicitly allows for a 'but for' adjustment in goal setting in its DBE program under certain conditions "If you attempt to make an adjustment to your base figure to account for the continuing effects of past discrimination (often called the "but for" factor) or the effects of an ongoing DBE program, the adjustment must be based on demonstrable evidence that is logically and directly related to the effect for which the adjustment is sought" <http://osdbu.dot.gov/business/dbe/final/final53.cfm>. See also Federal Register, Tuesday February 2<sup>nd</sup> 1999, p.5131 – "Participation by Disadvantaged Business Enterprises in Department of Transportation Programs" at <http://osdbu.dot.gov/documents/pdf/dbe/dbe.pdf>

<sup>79</sup> Although it should be noted that they were significant negative effects for white females and Asians in Table 26 in the 2000, 1990 and 1980 Censuses for white women and in the 2000 and 1990 Census for Asians.

Metropolitan area. Moreover, there is overwhelming evidence of discrimination against African-Americans, both statistical and anecdotal

*b) Hispanics*

The starting point for the calculations for Hispanic-owned firms is the 7.7% availability estimate after adjustment #1. The 'but-for' calculation is applied then this suggests a new goal of 15%. That would imply a significant, but not implausible uplift as a result of the 'but-for' adjustment. This does seem very high but is considerably lower than their percentage in the Chicago construction occupations in **Table 30**, row 3.

*Final availability after adjustment #2 and rounding*

|                         |       |
|-------------------------|-------|
| White females           | 4.0%  |
| Blacks                  | 7.0%  |
| Asians                  | 2.0%  |
| Hispanics               | 15.0% |
| Total WBE availability  | 4.0%  |
| Total MBE availability  | 24.0% |
| Total MWBE availability | 28.0% |

At a time of deep recession it may well prove to be difficult for the City of Chicago to fill the goal levels that are actually already in place. Minority firms are finding it hard to survive. *Hence this is not the time to increase the size of the goals. It is also certainly not a time to lower the size of the goals program or remove groups from it.* So my recommendation is that now is the time to keep the goals remain where they currently are. A possibility though would be to extend the geographic area covered by the program to include the northern part of Illinois and the three additional small Illinois counties to give the Procurement Department a larger pool of MWBEs to draw from. This is what I recommend below.

This resetting of aspirational goals needs to be re-conducted periodically because MBE and WBE involvement in City procurement is apt to be in a continual state of change. The fundamental justification for preferential procurement lies in the "level playing field" concept. When the barriers facing minorities and white women are no longer higher than the barriers faced by white men who establish and operate firms in the Chicago region, then the applicable playing field will be level. This is the point in time when procurement preferences should cease. Considerable caution has also to be exercised here because these are estimates in the presence of the goals program. If the program were to be removed, based on evidence from around the country (Blanchflower and Wainwright, 2005), utilization of MWBEs has tended to drop precipitously. The time does not appear to be now to remove the program.

**Is there anything the City of Chicago can do to help its prime and sub-contractors get through this crisis?**

The first thing it is doing is to maintain its construction activity as far as it can to act as a buffer to the declines in private sector construction by acting as what economists call an

'automatic stabilizer'. Public sector construction nationally is now a larger proportion of total construction than it was a year ago.

Second, the City of Chicago can try to ensure it does not 'slow pay' which would deprive these firms of much needed injections of cash. One possibility which could have immediate positive impact on construction contractors ability to succeed in the current credit crisis would be for the City to establish a program with one or more local banks, whereby the bank would serve as a type of intermediary escrow agent/direct payor to construction subcontractors, in order to facilitate quicker payment to subcontractors. Prompt pay to MWBE subcontractors is a key program to strengthen and grow successful MWBEs. Ideally, the structure would work as follows. Upon approval by the prime contractor of a payout under a City construction contract to the subcontractors working on that project, the appropriate City user department would approve the payout, as is done currently. The subcontractor would then take that approval to the intermediary bank. The intermediary bank would advance the payout to the subcontractor, less an amount to cover an anticipated interest reserve and a reasonable processing fee for the bank. The City would guarantee payment of the advance to the bank, which would be processed in much the same way such payments are currently processed.

The only distinction is that the payout would ultimately go to the bank, thereby extinguishing the obligation created by the advance. The advantage of this form of structure is that it would potentially allow subcontractors to take advantage of the City's prime lending rate, without the credit worthiness of the particular subcontractor being an issue. The City could even agree to shoulder some piece of the interest costs to minimize the cost to the subcontractor (on a shared basis, if the prime rate is 5.5%, then each party would bear a 2.75% interest cost). This program would be instituted in a race neutral way to all sub-contractors, perhaps up to some maximum value of say \$50,000.

A further possibility would be for the City to immediately implement a 'direct pay' policy, whereby it directly pays all of its sub-contractors in a race and gender neutral way, without using prime contractors as intermediaries. This is permitted under the current Ordinance. "Adopting prompt payment procedures, including requiring by contract that prime contractors pay subcontractors within specified days of receipt of payment from the city and where necessary, issuing payments to subcontractors." (See Municipal Code Section 2-92-710(f)).

One issue that should be discussed is to what extent race neutral measures can be used to alleviate the effects of the discrimination we have found against minorities and women in the Chicago construction market. As we have mentioned before and discuss in our recommendations section, the most effective race neutral measure the City can employ is to improve the timing of its payments to contractors and subcontractors. Given the fact that the City cannot directly counter discrimination in the credit markets, improving the City's reputation for slow payment, including consideration of a third party bank payor, using the City's credit rating, is a significant race neutral measure that we recommend. Additionally, we understand that the Department of Procurement Services is preparing a proposal for a small and local business target market in construction. This too could be



an effective race neutral measure that could foster the development of additional prime contractors, and thus foster competition. A third race neutral measure that is perhaps more difficult to employ, that could be considered is “unbundling” of contracts, again to allow smaller businesses to compete more effectively as prime contractors. This was mentioned by both Asian contractors in Dr. Lau’s report, as well as by women contractors in Dr. Aparicio’s (2008b) supplemental report. I recognize that the concept of unbundling construction contracts may clash with the goal of increasing administrative efficiency, but I recommend that this measure be given consideration.

*However, while I recommend that race neutral measures be used, my research indicates that by themselves, they have not been effective in alleviating discrimination in the construction industry.* The most compelling evidence comes from the results of programs that have discontinued race conscious measures in favor of race neutral measures, resulting in substantial immediate and substantial reduction in minority participation.

During the course of the BAGC vs City of Chicago trial I testified on the decline in the utilization of minorities in two local jurisdictions where a goals program was enjoined. I presented evidence at trial from both the Chicago Water District and Cook County to show that implementing or removing programs had major impacts on the utilization of minorities. Without the programs, utilization of minority and female-owned firms was much lower in both jurisdictions without the program than with a program operating. I will examine each in turn.

First the Chicago Metropolitan Water District had a very low utilization of firms owned by women or minorities during the 1970s. From 1972-1974 Minority Business Enterprises (MBEs) utilization in dollars spent was only 0.46 percent. From July 1977-May 1979 it was 2 percent. Effective from May 1979 a goals program was implemented with goals of 10-15 percent on EPA funded contracts. From this point utilization jumped rapidly and remained high during the years the program was in effect, as can be seen below

|                       |           |          |
|-----------------------|-----------|----------|
| May 1979-January 1982 | 12.7% MBE |          |
| 1982                  | 12.3% MBE |          |
| 1983                  | 12.8% MBE |          |
| 1984                  | 12.5% MBE |          |
| 1985                  | 10.6% MBE | 2.2% WBE |
| 1986                  | 12.3% MBE | 6.5% WBE |
| 1987                  | 17.7% MBE | 7.7% WBE |
| 1988                  | 16.8% MBE | 7.7% WBE |
| 1989                  | 13.9% MBE | 9.6% WBE |

When the goals program was suspended in 1989, the utilization of MBEs and WBEs dropped dramatically. During the first half of 1989 \$19.6 million of contracts were awarded with the goals still in place. Utilization of MBEs was 23.6 percent with a further to 16.3 percent going to WBEs., half 1989 contracts without goals. During the second half of 1989 when the goals program had gone and contractors were free to determine

their own usage of MWBEs of the \$63.6 million awarded only 10.8 percent went to MBEs and a further 7.4 percent went to WBEs.<sup>80</sup>

In 2002 the County of Cook's sub-contractor goals program was struck down.<sup>81</sup> During the course of the trial in the case of the BAGC vs City of Chicago, which is the same plaintiff but a different defendant from an overlapping jurisdiction, the trial judge, Judge Moran asked both parties to calculate post-injunction utilization in Cook County. There was some dispute on the record between the lawyers representing both parties on how to exactly calculate availability, which contracts should be included etc. Although there appeared to be no final agreement as to the exact numbers it was clear from the numbers that both sides presented that the utilization of minorities and women in Cook County had dropped by more than one half. The program had an impact and when it was removed prime contractors were much less likely to use minority and women sub-contractors. Prior to the entry of the injunction the Cook County ordinance set – and apparently met - sub-contractor goals for MBEs of 30 percent and for WBEs of an additional 10 percent making 40 percent in all. When contracts relating to medical equipment and supplies were omitted and restricting the analysis to contracts involving 'dirt' upon examining contracts awarded by Cook County post-litigation in 2001 and thereafter it was found that MBE utilization had fallen dramatically. Defendant's Exhibit 496B shows that the spending was as follows post 2001. Out of a total of \$51,045,508.09 in contract dollars spent, \$19,741,139.25 was for equipment and was removed from the calculations. This leaves \$31,304,368.83 of which \$4,016,641.58 went to MBEs (12.83 percent) and \$1,579,768.97 went to WBEs (5.05 percent). Overall then \$5,596,410.55 out of \$31,304,368.83 went to MWBEs (17.88 percent). This is a dramatic drop from the pre-injunction levels at a time when these contractors were likely aware that they were under scrutiny and likely to be on their best behavior as they were plaintiffs in ongoing litigation on the same issue with an overlapping jurisdiction.

There is also evidence from the Illinois State Toll Authority that suggests that voluntary goals are ineffective. The Authority's service area is encompassed by IDOT's District 1. Until quite recently it had a voluntary goal of awarding 15% of its prime and subcontracting dollars to DBEs. Operating in the same market place as IDOT's District 1 the Toll Authority awarded 1.3% of its contracting dollars to DBEs in 2002 (none as primes) and 0.9% in 2003 (two as primes). In contrast IDOT awarded 14.2% of its District 1 contracts to DBEs in 2002; 13.7% in 2003 and 17.8% through June 2004.<sup>82</sup>

In a study of disadvantaged business enterprises the General Accounting Office examined the claims made in during the passage of the Transportation Equity Act for the 21<sup>st</sup>

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<sup>80</sup> These numbers are taken from the Chicago Metropolitan Water District Study, 1990

<sup>81</sup> Builders Association of Greater Chicago vs. County of Cook, in the U.S. District Court for the Northern District of Illinois Eastern Division, # 96 c 1121, November 2, 2000, Decided

<sup>82</sup> IDOT FY2007 Overall DBE goal submission to the USDOT

Century (TEA 21) that minority participation in Michigan declined after the minority business contracting program was discontinued in 1989<sup>83</sup>. They reported that

“Michigan could not provide us with minority- and women-owned business participation data in state highway contracting for the years immediately before and after it discontinued its program. Furthermore, Michigan officials stated that the analysis showing the decline that is often cited was a one-time-only analysis and that the analysis is no longer available. Consequently, we cannot verify the numbers cited during the debate” (page 37 footnote 52).

Hence, the claims related to Michigan thus do have to be treated with a degree of skepticism, but they appear to be entirely consistent with other evidence reported in the GAO report from the states of Louisiana and Minnesota. The GAO reported that MWBE participation in transport contracting declined after Louisiana’s nonfederal program was discontinued. As shown in **Figure 3**, taken from the GAO report, MWBE participation in state transportation contracting increased from 1992 to 1995. In 1996, the year the nonfederal program was discontinued, the participation rate of MWBEs in state transportation contracting dropped and continued to decline over the next 4 years (Page 40). The GAO reported that an official from Louisiana attributed the decline in MWBEs’ participation in state transportation contracting to the removal of affirmative action requirements on state funded projects and the realization by contractors that efforts to include MWBEs were no longer necessary. The GAO also obtained data on DBE participation in Louisiana’s federal DBE program from 1995 to 2000. In their review of the data on DBE and MWBE participation in federally assisted and state contracting, they did not observe a shift of MWBEs to federally assisted contracts after the Louisiana’s MWBE program was discontinued. This evidence is entirely consistent with the evidence presented above that the goals programs work: removing them impacts negatively the usage of minority and women-owned firms.

I also worked as an expert for the State of Minnesota Department of Transportation (MnDOT), the U.S. Department of Transportation (USDOT) and the U.S. Department of Justice (USDOJ) as intervenors in the Sherbrooke Turf case.<sup>84</sup> Sherbrooke Turf, Inc. is a Minnesota corporation, which provides landscaping services for land adjacent to highways. In order to be selected as a highway subcontractor, it submits bids on federally funded highway construction projects in Minnesota. Sherbrooke is owned and operated by Caucasian males. Sherbrooke claimed the Disadvantaged Business Enterprise ("DBE") provisions of the Transportation Equity Act for the 21st Century

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<sup>83</sup> Disadvantaged Business Enterprises. Critical Information is needed to Understand Program Impact, Report to Congressional Committees, General Accounting Office, GAO-01-586. Available at <http://www.gao.gov/new.items/d01586.pdf>

<sup>84</sup> U.S. District Court District of Minnesota, Sixth Division: Sherbrooke Turf, Inc., vs. Minnesota Department of Transportation, United States of America, United States Department of Transportation and Federal Highway Commission. Court file no. 00-cv-1026 jmr/rle

("TEA-21") were unconstitutional. Sherbrooke also challenged USDOT's implementing regulations, and MnDOT's participation in the DBE program. Sherbrooke claimed that because of its male-Caucasian ownership, it suffers a constitutional injury when bidding on Minnesota's federally funded road construction projects. Finally, Sherbrooke claimed the DBE program was both facially unconstitutional and unconstitutional as applied. On November 14, 2001, the Defendants' motion for summary judgment was granted. The plaintiff's motion for summary judgment was denied, as was plaintiff's motion for a temporary restraining order and preliminary injunction.

As part of my report in that case I was able to obtain information on what happened to utilization of MWBEs when Minnesota's program was temporarily enjoined. On September 2, 1998, Judge Rosenbaum enjoined Minnesota Department of Transportation's (MnDOT) MWBE Program.<sup>85</sup> In August 1999, Judge Rosenbaum ruled that the *Sherbrooke I* injunction only applied to ISTEA and not to TEA-21. On April 28, 2000, MnDOT let its first contracts using goals under the TEA-21 MWBE Program. MnDOT did not operate any sort of MWBE program during the time the program was enjoined. MnDOT also did not certify any new MWBEs during that time. MnDOT did not monitor the certification status of MWBEs certified prior to the injunction. Strictly speaking, there were no certified MWBEs during the 1999 construction season because there was no program under which minority and female owned firms could be certified. During the period of enjoinderment, MnDOT continued to monitor the participation in federal aid projects by the MWBEs certified under the enjoined program. This monitoring spanned the 1999 construction season, which is based on the federal fiscal year ("FFY"), October 1, 1998 through September 30, 1999.

When monitoring MWBE participation during the period of enjoinderment, MnDOT relied upon prime contractors voluntarily submitting information to MnDOT. MnDOT did not receive a 100 percent return rate from the contractors.<sup>86</sup> During the 1999 construction season, MWBEs certified under the enjoined MWBE Program received approximately 2.6 percent of the contract dollars. That number was subsequently used by MnDOT to reflect the amount it believed it could achieve through race and gender neutral means. When MnDOT began implementing its TEA-21 MWBE Program, it required all firms seeking MWBE certification under the TEA-21 MWBE Program to submit an application. Firms certified under the enjoined MWBE Program were required to submit a new application.

During the Senate hearings on TEA-21 Senator Baucus cited the experience of Michigan where participation in the state-funded portion of the highway program fell to zero in a nine month period after the state terminated its MWBE program while the federal program was able to maintain 12.7 percent participation. Senator Kerry also cited similar

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<sup>85</sup> This is taken from my rebuttal report in the Sherbrook Turf case – "Rebuttal of reports by plaintiff's expert La Noue" by David G. Blanchflower, March 12, 2001.

<sup>86</sup> See Lloyd Deposition, Vol. 1, pps. 43-44.

decreases in MWBE participation in Louisiana, Hillsborough County, Florida, and San Jose, California. Senator Moseley-Braun added the examples of Arizona, Arkansas, Rhode Island and Delaware where state-funded projects without a MWBE program have significantly less MWBE participation than federally funded projects subject to the highway program. Senator Kennedy added Nebraska, Missouri, Tampa, and Philadelphia to the list of jurisdictions that experienced precipitous drops in MWBE participation after goals programs ended<sup>87</sup>. It turns out that is exactly the case in Minnesota.

MnDOT examined their construction expenditure data for me for the calendar year 1996-1999 and produced the results reported in Table 54. The total amount of contract dollars grew from \$210 million in FFY96 to \$296 million in FFY 1999. In the years 1996-1998 when the program was in existence the proportion of contract dollars given to MWBEs averaged 10.8 percent, split up as 2.2 percent for minority men; 0.1 percent for minority women and 8.5 percent for Caucasian women. For the year 1999 when the program was enjoined, the proportion of contract dollars paid to MWBEs fell to 2.25 percent. The amount paid to women fell to 1.95 percent but the most precipitous decline was for minority men who in 1999 received only 0.28 percent of contract dollars. In 1999 the amount of dollars received by minority males fell from just over \$6.5 million to \$841,000. The amount of contract dollars received in 1999 by minority men was only 12.7 percent of the amount they received when the program was in existence. Michigan and Minnesota appear to be similar – remove the goals and the participation of MWBEs falls precipitously. The evidence on the decline in DBE participation when the program was enjoined was used by MnDOT to determine the proportion of their goals that could be obtained by race neutral means.

There is more. Once Judge Rosenbaum lifted the injunction on the program, utilization rose again rapidly to levels comparable to those pertaining prior to the temporary restraining order. **Table 54** provides further supporting evidence: it provides quarterly information for the five quarters for which data are available since the program restarted and MWBEs once again were re-certified. It shows dramatic increases in the use of MWBEs once the program was reintroduced. MWBE's gained no contracts at all in Q1-FFY 2000. By the 1<sup>st</sup> quarter of 2001 participation of MWBEs had risen to 8.7 percent. Most notable was the increase in the participation of minority men.

The GAO report also examined the evidence for Minnesota and confirmed my findings that after the discontinuance of Minnesota's federal DBE program in 1998, Disadvantaged Business Enterprises (DBEs) participation in federal transportation contracting dramatically declined. This evidence is confirmed in **Figure 4** taken from their report, which shows dramatic declines post 1998 both in the number of contracts and dollars awarded to DBEs.

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<sup>87</sup> See p 5101 Federal Register / Vol. 64, No. 21 / Tuesday, February 2, 1999 / Rules and Regulations.

In a decision dated October 6<sup>th</sup> 2003 the 8<sup>th</sup> Circuit Court of Appeals dismissed<sup>88</sup> the appeals of the plaintiffs in both the *Sherbrooke Turf* case as well as in *Gross Seed*, another case in which I was a testifying expert.<sup>89</sup> In that decision the Appeals Court examined the issue of narrow tailoring and was persuaded of the validity of my evidence of the dramatic decline in DBE participation in Minnesota when the program was enjoined.

“The precipitous drop in DBE participation in 1999, when no race-conscious methods were employed, supports MnDOT’s conclusion that a substantial portion of its 2001 overall goal could not be met with race-neutral measures, and there is no evidence that MnDOT failed to adjust its use of race-conscious and race-neutral methods as the year progressed, as the DOT regulations require. On this record, we agree with the district court that the revised DBE program serves a compelling government interest and is narrowly tailored, on its face and as applied in Minnesota. Accordingly, the court properly granted summary judgment dismissing Sherbrooke’s claims.” (pp.12-13)

A further question that needs addressing is how long the Ordinance should last for and whether there should be an interim review. There are strong arguments to suggest that the next sunset review of the program should wait until the 2010 Census data become available. According to the Census Bureau's website, data products such as demographic profiles, summary files of aggregated data, and reports will be released from April 2011 through September 2013. Hence, if the Ordinance were to be put in place until the end of 2015 that should provide ample time for data analysis. It would also make sense to have an interim review after three years at the end of 2012 to consider the impact of recession on particular groups.

Hence I would recommend that the City of Chicago proceeds as follows and adopts the following recommendations.

**Recommendation #1**

Given the magnitude of this recession, which is likely the most significant for a century, I recommend that the goals in construction remain as they currently are, as follows.

|                         |     |
|-------------------------|-----|
| Total MBE goal          | 24% |
| Total WBE goal          | 4%  |
| Total MWBE availability | 28% |

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<sup>88</sup> United States Court of Appeals for the 8<sup>th</sup> Circuit. *Sherbrooke Turf v. Minnesota Dept. of Transportation et al* (No. 02-1665) and *Gross Seed Company v. Nebraska Dept. of Roads et al*, District Court of Nebraska, No. 02-3016 before Circuit Judges Loken, Fagg and Murphy.

<sup>89</sup> *Gross Seed Company v. Nebraska Dept. of Roads et al*, District Court of Nebraska.

My recommendation is that minorities are defined as - African-Americans or Blacks; Hispanics, Asians/Pacific Islanders and Native Americans. Firms owned by minority women could count against either the MBE or the WBE goals.

**Recommendation #2**

The onset of recession is likely to make things much worse for Asian-owned firms to survive in the Chicago construction industry. This is not the time to remove them from the program. I recommend revisiting this question of whether Asians should remain in the program once the current economic maelstrom comes to an end.

**Recommendation #3**

I recommend the area covered by the program is expanded from the six county area of DeKalb County, Grundy County and Kendall County to the broader Chicago, IL Primary Metropolitan Statistical Area (PMSA) also called the Chicago-Naperville-Joliet, IL Metropolitan Division. This area is the sum of Cook County; DeKalb County; DuPage County; Grundy County; Kane County; Kendall County; Lake County; McHenry County and Will County as defined by the Office of Management and Budget. This means adding DeKalb County, Grundy County and Kendall County.

**Recommendation #4**

In addition I recommend that firms located in the counties of Lake and Porter from Northern Indiana also be added to the program

**Recommendation #5**

I recommend the City immediately looks into the possibility of implementing programs of 'fast pay' and 'direct-pay' assuming that any legal issues can be resolved. These proposals are intended to help level the playing field for the City's construction sub-contractors who are being particularly hard hit by the credit crunch and the decline in the private construction industry, both residential and non-residential.

**Recommendation #6**

I recommend that the new Ordinance be put in place until the end of 2015. I further recommend that an interim review be undertaken by the end of 2012 to allow for an examination of the impact of the recession.

**Table 1. House prices, January 2006-December 2008**

|        | House prices |       |
|--------|--------------|-------|
|        | SA           | NSA   |
|        | 1            | 2     |
| Jan-06 | 10.4         | 14.7  |
| Feb-06 | 8.4          | 13.8  |
| Mar-06 | 7.2          | 12.3  |
| Apr-06 | 4.0          | 11.2  |
| May-06 | 5.3          | 10.0  |
| Jun-06 | 0.1          | 8.6   |
| Jul-06 | 1.0          | 7.2   |
| Aug-06 | -2.2         | 5.7   |
| Sep-06 | -1.8         | 4.3   |
| Oct-06 | -4.4         | 3.0   |
| Nov-06 | -3.4         | 1.8   |
| Dec-06 | -0.2         | 0.7   |
| Jan-07 | -3.0         | -0.1  |
| Feb-07 | -1.0         | -0.8  |
| Mar-07 | -0.1         | -1.3  |
| Apr-07 | -1.2         | -2.1  |
| May-07 | -2.5         | -2.8  |
| Jun-07 | -0.1         | -3.4  |
| Jul-07 | -0.7         | -3.8  |
| Aug-07 | 0.2          | -4.3  |
| Sep-07 | -4.7         | -4.9  |
| Oct-07 | -5.6         | -6.1  |
| Nov-07 | -3.9         | -7.7  |
| Dec-07 | -6.6         | -9.0  |
| Jan-08 | -5.3         | -10.7 |
| Feb-08 | -8.2         | -12.7 |
| Mar-08 | -8.0         | -14.3 |
| Apr-08 | -8.5         | -15.2 |
| May-08 | -6.6         | -15.8 |
| Jun-08 | -6.1         | -15.9 |
| Jul-08 | -8.0         | -16.3 |
| Aug-08 | -9.5         | -16.6 |
| Sep-08 | -9.1         | -17.4 |
| Oct-08 | -9.8         | -18.1 |
| Nov-08 | -13.6        | -18.2 |
| Dec-08 | -15.3        |       |

Column 1. Median house prices of existing one family homes inc. condos National Association of Realtors % oya

Column 2. 20 city house price index - S & P / Case-Shiller % oya

SA=seasonally adjusted. NSA=not seasonally adjusted

Source: Blanchflower (2008) and Data Appendix Table 1



**Table 2. Standard and Poor's Case-Shiller house price index, New York, March 31, 2009**

| <b>Metropolitan Area</b> | <b>January<br/>2009<br/>Level</b> | <b>January/<br/>December<br/>Change (%)</b> | <b>December/<br/>November<br/>Change (%)</b> | <b>1 Year<br/>Change (%)</b> |
|--------------------------|-----------------------------------|---|--|------------------------------|
| Atlanta                  | 109.44                            | -3.2%                                       | -3.0%  | -14.3%                       |
| Boston                   | 150.73                            | -1.5%                                       | -1.3%  | -7.3%                        |
| Charlotte                | 120.91                            | -1.2%                                       | -2.6%  | -8.2%                        |
| Chicago                  | 130.80                            | -4.6%                                       | -3.0%  | -16.4%                       |
| Cleveland                | 102.89                            | -2.2%                                       | -2.1%  | -5.2%                        |
| Dallas                   | 112.75                            | -2.4%                                       | -2.4%  | -4.9%                        |
| Denver                   | 122.33                            | -2.7%                                       | -1.5%  | -5.1%                        |
| Detroit                  | 77.56                             | -4.2%                                       | -3.0%  | -22.6%                       |
| Las Vegas                | 125.64                            | -4.4%                                       | -4.8%  | -32.5%                       |
| Los Angeles              | 166.54                            | -2.8%                                       | -2.5%  | -25.8%                       |
| Miami                    | 159.04                            | -3.6%                                       | -2.7%  | -29.4%                       |
| Minneapolis              | 120.18                            | -4.7%                                       | -5.1%  | -20.4%                       |
| New York                 | 181.28                            | -1.2%                                       | -1.6%  | -9.6%                        |
| Phoenix                  | 117.11                            | -5.5%                                       | -5.1%  | -35.0%                       |
| Portland                 | 153.80                            | -3.0%                                       | -2.5%  | -14.0%                       |
| San Diego                | 148.25                            | -2.6%                                       | -2.1%  | -24.9%                       |
| San Francisco            | 124.33                            | -4.4%                                       | -3.8%  | -32.4%                       |
| Seattle                  | 154.37                            | -3.6%                                       | -3.6%  | -15.0%                       |
| Tampa                    | 149.21                            | -4.4%                                       | -3.0%  | -23.3%                       |
| Washington               | 171.97                            | -2.0%                                       | -2.6%  | -19.3%                       |
| Composite-10             | 158.04                            | -2.5%                                       | -2.3%  | -19.4%                       |
| Composite-20             | 146.40                            | -2.8%                                       | -2.6%  | -19.0%                       |

Source: <http://www.homeprice.standardandpoors.com>

Notes: January 2000=100

Table 3. Value of Construction Put in Place - Seasonally Adjusted Annual Rate (\$millions)

| Type of Construction                    | Dec<br>2008 <sup>P</sup> | Nov<br>2008 <sup>F</sup> | Oct<br>2008 <sup>F</sup> | Sep<br>2008 | Aug<br>2008 | Dec<br>2007 | Percent change<br>Dec 2008 from - |             |
|---|--------------------------|--------------------------|--------------------------|-------------|-------------|-------------|-----------------------------------|-------------|
|   |                          |                          |                          |             |             |             | Nov<br>2008                       | Dec<br>2007 |
|   |                          |                          |                          |             |             |             | Total Construction                | 1,053,717   |
| Nonresidential                          | 726,840                  | 731,098                  | 730,857                  | 731,155     | 724,790     | 672,602     | -0.6                              | 8.1         |
| Lodging                                 | 37,939                   | 38,014                   | 37,963                   | 38,874      | 39,896      | 32,216      | -0.2                              | 17.8        |
| Office                                  | 73,106                   | 73,627                   | 73,982                   | 75,261      | 73,557      | 68,263      | -0.7                              | 7.1         |
| Commercial                              | 78,451                   | 79,646                   | 81,261                   | 81,491      | 85,121      | 88,678      | -1.5                              | -11.5       |
| Health care                             | 48,561                   | 48,186                   | 48,559                   | 48,197      | 46,643      | 44,499      | 0.8                               | 9.1         |
| Educational                             | 104,814                  | 105,596                  | 105,689                  | 105,704     | 106,242     | 100,606     | -0.7                              | 4.2         |
| Religious                               | 7,568                    | 7,496                    | 7,637                    | 7,000       | 6,740       | 7,165       | 1.0                               | 5.6         |
| Public safety                           | 14,478                   | 14,377                   | 12,836                   | 12,412      | 12,629      | 11,021      | 0.7                               | 31.4        |
| Amusement and recreation                | 21,831                   | 22,439                   | 22,534                   | 22,706      | 23,091      | 23,120      | -2.7                              | -5.6        |
| Transportation                          | 34,906                   | 35,572                   | 36,046                   | 35,980      | 35,429      | 34,699      | -1.9                              | 0.6         |
| Communication                           | 22,453                   | 21,405                   | 22,299                   | 23,193      | 23,194      | 28,753      | 4.9                               | -21.9       |
| Power                                   | 73,691                   | 76,378                   | 74,092                   | 77,014      | 73,975      | 58,047      | -3.5                              | 27.0        |
| Highway and street                      | 82,260                   | 84,329                   | 83,811                   | 82,599      | 83,621      | 78,343      | -2.5                              | 5.0         |
| Sewage and waste disposal               | 26,833                   | 27,071                   | 26,893                   | 26,024      | 25,289      | 25,520      | -0.9                              | 5.1         |
| Water supply                            | 17,955                   | 17,820                   | 17,525                   | 17,662      | 17,827      | 14,082      | 0.8                               | 27.5        |
| Conservation and development            | 6,259                    | 5,607                    | 5,232                    | 4,936       | 5,751       | 6,013       | 11.6                              | 4.1         |
| Manufacturing                           | 75,734                   | 73,536                   | 74,501                   | 72,101      | 65,785      | 51,576      | 3.0                               | 46.8        |
| Total Private Construction <sup>1</sup> | 737,102                  | 749,566                  | 766,915                  | 777,025     | 769,061     | 797,545     | -1.7                              | -7.6        |
| Residential                             | 319,195                  | 329,863                  | 343,800                  | 350,165     | 352,936     | 413,878     | -3.2                              | -22.9       |
| Nonresidential                          | 417,908                  | 419,703                  | 423,116                  | 426,860     | 416,126     | 383,666     | -0.4                              | 8.9         |
| Lodging                                 | 37,717                   | 37,814                   | 37,768                   | 38,624      | 39,473      | 31,225      | -0.3                              | 20.8        |
| Office                                  | 56,222                   | 57,753                   | 58,243                   | 59,684      | 58,222      | 56,103      | -2.7                              | 0.2         |
| Commercial                              | 75,512                   | 76,431                   | 77,812                   | 78,408      | 81,627      | 85,143      | -1.2                              | -11.3       |
| Health care                             | 39,573                   | 39,515                   | 39,354                   | 39,466      | 37,552      | 36,014      | 0.1                               | 9.9         |
| Educational                             | 18,573                   | 18,570                   | 19,420                   | 19,791      | 18,738      | 18,612      | 0.0                               | -0.2        |

|                              |         |         |         |         |         |         |      |       |
|------------------------------|---------|---------|---------|---------|---------|---------|------|-------|
| Religious                    | 7,568   | 7,471   | 7,637   | 6,925   | 6,706   | 7,165   | 1.3  | 5.6   |
| Amusement and recreation     | 9,804   | 10,474  | 10,868  | 10,786  | 11,122  | 11,620  | -6.4 | -15.6 |
| Transportation               | 10,384  | 10,469  | 10,196  | 10,389  | 10,103  | 9,875   | -0.8 | 5.2   |
| Communication                | 22,338  | 21,276  | 22,093  | 22,989  | 22,986  | 28,658  | 5.0  | -22.1 |
| Power                        | 63,201  | 64,941  | 63,491  | 66,089  | 62,190  | 46,039  | -2.7 | 37.3  |
| Manufacturing                | 75,303  | 73,127  | 73,998  | 71,580  | 65,260  | 51,193  | 3.0  | 47.1  |
| Total Public Construction    | 316,615 | 319,271 | 315,364 | 312,356 | 316,681 | 295,976 | -0.8 | 7.0   |
| Residential                  | 7,683   | 7,876   | 7,622   | 8,062   | 8,017   | 7,041   | -2.5 | 9.1   |
| Nonresidential               | 308,932 | 311,395 | 307,742 | 304,294 | 308,664 | 288,936 | -0.8 | 6.9   |
| Office                       | 16,884  | 15,874  | 15,738  | 15,578  | 15,335  | 12,160  | 6.4  | 38.8  |
| Commercial                   | 2,939   | 3,215   | 3,448   | 3,083   | 3,494   | 3,535   | -8.6 | -16.9 |
| Health care                  | 8,988   | 8,671   | 9,205   | 8,731   | 9,090   | 8,485   | 3.7  | 5.9   |
| Educational                  | 86,241  | 87,026  | 86,269  | 85,913  | 87,503  | 81,995  | -0.9 | 5.2   |
| Public safety                | 13,973  | 13,862  | 12,286  | 11,899  | 12,014  | 10,445  | 0.8  | 33.8  |
| Amusement and recreation     | 12,027  | 11,965  | 11,666  | 11,920  | 11,969  | 11,500  | 0.5  | 4.6   |
| Transportation               | 24,522  | 25,103  | 25,850  | 25,590  | 25,326  | 24,824  | -2.3 | -1.2  |
| Power                        | 10,490  | 11,436  | 10,602  | 10,925  | 11,785  | 12,008  | -8.3 | -12.6 |
| Highway and street           | 82,145  | 84,169  | 83,631  | 82,450  | 83,474  | 77,871  | -2.4 | 5.5   |
| Sewage and waste disposal    | 26,456  | 26,509  | 26,111  | 25,317  | 24,696  | 25,123  | -0.2 | 5.3   |
| Water supply                 | 17,275  | 17,227  | 16,854  | 16,970  | 17,105  | 13,557  | 0.3  | 27.4  |
| Conservation and development | 6,225   | 5,574   | 5,177   | 4,869   | 5,681   | 5,963   | 11.7 | 4.4   |

Notes: 1. Includes the following categories of private construction not shown separately: public safety, highway and street, sewage and waste disposal, water supply, and conservation and development. 2. Includes the following categories of public construction not shown separately: lodging, religious, communication and manufacturing. Source: Census Bureau

<http://www.census.gov/const/www/c30index.html>

Table 4. Construction put in place, 2007 and 2008

| Type of Construction                    | 2008 <sup>P</sup> | 2007      | Percent change |
|---|-------------------|-----------|----------------|
| Total Construction                      | 1,078,858         | 1,137,152 | -5.1           |
| Residential                             | 365,891           | 499,650   | -26.8          |
| Nonresidential                          | 712,966           | 637,502   | 11.8           |
| Lodging                                 | 37,091            | 28,728    | 29.1           |
| Office                                  | 72,714            | 64,731    | 12.3           |
| Commercial                              | 85,598            | 88,777    | -3.6           |
| Health care                             | 46,583            | 42,882    | 8.6            |
| Educational                             | 104,314           | 96,348    | 8.3            |
| Religious                               | 7,138             | 7,447     | -4.1           |
| Public safety                           | 12,560            | 9,899     | 26.9           |
| Amusement and recreation                | 22,914            | 21,719    | 5.5            |
| Transportation                          | 35,243            | 32,420    | 8.7            |
| Communication                           | 24,899            | 27,040    | -7.9           |
| Power                                   | 70,798            | 53,371    | 32.7           |
| Highway and street                      | 80,707            | 76,021    | 6.2            |
| Sewage and waste disposal               | 25,770            | 24,665    | 4.5            |
| Water supply                            | 16,959            | 15,583    | 8.8            |
| Conservation and development            | 5,364             | 5,226     | 2.6            |
| Manufacturing                           | 64,315            | 42,644    | 50.8           |
| Total Private Construction <sup>1</sup> | 770,392           | 850,009   | -9.4           |
| Residential                             | 358,351           | 492,499   | -27.2          |
| Nonresidential                          | 412,041           | 357,510   | 15.3           |
| Lodging                                 | 36,663            | 27,503    | 33.3           |
| Office                                  | 57,911            | 53,377    | 8.5            |
| Commercial                              | 82,272            | 84,999    | -3.2           |
| Health care                             | 37,827            | 34,776    | 8.8            |
| Educational                             | 18,771            | 17,071    | 10.0           |
| Religious                               | 7,107             | 7,429     | -4.3           |
| Public safety                           | 686               | 495       | 38.6           |
| Amusement and recreation                | 11,041            | 10,352    | 6.7            |
| Transportation                          | 10,208            | 9,444     | 8.1            |
| Communication                           | 24,726            | 26,947    | -8.2           |
| Power                                   | 59,432            | 41,481    | 43.3           |
| Sewage and waste disposal               | 605               | 383       | 58.0           |
| Water supply                            | 712               | 460       | 54.8           |
| Manufacturing                           | 63,817            | 42,229    | 51.1           |
| Total Public Construction <sup>2</sup>  | 308,465           | 287,143   | 7.4            |
| Residential                             | 7,540             | 7,151     | 5.4            |
| Nonresidential                          | 300,925           | 279,992   | 7.5            |
| Office                                  | 14,802            | 11,353    | 30.4           |
| Commercial                              | 3,326             | 3,778     | -12.0          |
| Health care                             | 8,757             | 8,106     | 8.0            |
| Educational                             | 85,543            | 79,278    | 7.9            |

|                              |        |        |      |
|------------------------------|--------|--------|------|
| Public safety                | 11,874 | 9,404  | 26.3 |
| Amusement and recreation     | 11,874 | 11,367 | 4.5  |
| Transportation               | 25,035 | 22,976 | 9.0  |
| Power                        | 11,366 | 11,890 | -4.4 |
| Highway and street           | 80,497 | 75,563 | 6.5  |
| Sewage and waste disposal    | 25,164 | 24,282 | 3.6  |
| Water supply                 | 16,247 | 15,122 | 7.4  |
| Conservation and development | 5,311  | 5,120  | 3.7  |

NA Not Applicable      p Preliminary

1 Includes the following categories of private construction not shown separately:

highway and street, and conservation and development.

2 Includes the following categories of public construction not shown separately: lodging, religious, communication, and manufacturing.

**Table 5. Housing activity**

|        | Housing activity |           |
|--------|------------------|-----------|
|        | SA<br>(1)        | SA<br>(2) |
| Jan-06 | 2292             | 2224      |
| Feb-06 | 2125             | 2129      |
| Mar-06 | 1965             | 2097      |
| Apr-06 | 1821             | 1987      |
| May-06 | 1944             | 1918      |
| Jun-06 | 1819             | 1879      |
| Jul-06 | 1746             | 1774      |
| Aug-06 | 1646             | 1731      |
| Sep-06 | 1721             | 1654      |
| Oct-06 | 1470             | 1560      |
| Nov-06 | 1565             | 1527      |
| Dec-06 | 1629             | 1628      |
| Jan-07 | 1403             | 1566      |
| Feb-07 | 1487             | 1541      |
| Mar-07 | 1491             | 1569      |
| Apr-07 | 1485             | 1457      |
| May-07 | 1440             | 1520      |
| Jun-07 | 1468             | 1413      |
| Jul-07 | 1371             | 1389      |
| Aug-07 | 1347             | 1322      |
| Sep-07 | 1182             | 1261      |
| Oct-07 | 1274             | 1170      |
| Nov-07 | 1178             | 1162      |
| Dec-07 | 1000             | 1,111     |
| Jan-08 | 1064             | 1,052     |
| Feb-08 | 1107             | 981       |
| Mar-08 | 988              | 932       |
| Apr-08 | 1,004            | 982       |
| May-08 | 982              | 978       |
| Jun-08 | 1,089            | 1,138     |
| Jul-08 | 949              | 937       |
| Aug-08 | 854              | 857       |
| Sep-08 | 824              | 805       |
| Oct-08 | 767              | 730       |
| Nov-08 | 651              | 615       |
| Dec-08 | 550              | 549       |

Column 1. Housing starts - Census Bureau. Annualized level, thousands of units

Column 2. Permits to build - Census Bureau. Annualized level, thousands of units

Source: <http://www.census.gov/const/www/newresconstindex.html>

**Table 6a. Foreclosures during Q1 2009 - states**

| Rank | State                | (1)     | (2)   | (3)    | (4)     |
|------|----------------------|---------|-------|--------|---------|
| --   | United States        | 803,489 | 159   | 9.16   | 23.63   |
| 35   | Alabama              | 3,669   | 582   | 74.71  | 115.82  |
| 33   | Alaska               | 551     | 512   | -24.31 | 14.55   |
| 2    | Arizona              | 49,119  | 54    | 6.22   | 79.24   |
| 20   | Arkansas             | 4,581   | 281   | -3.23  | 22.09   |
| 3    | California           | 230,915 | 58    | 35.13  | 35.97   |
| 12   | Colorado             | 12,605  | 169   | -13.84 | -33.64  |
| 15   | Connecticut          | 5,876   | 245   | -6.76  | -23.01  |
| 31   | Delaware             | 828     | 469   | 2.6    | 54.19   |
|      | District of Columbia | 837     | 340   | 4.23   | -23.14  |
| 4    | Florida              | 119,220 | 73    | -12.19 | 35.64   |
| 7    | Georgia              | 28,608  | 138   | 10.66  | 0.37    |
| 26   | Hawaii               | 1,554   | 326   | 25.32  | 318.87  |
| 8    | Idaho                | 4,293   | 147   | 15.56  | 137.18* |
| 5    | Illinois             | 38,966  | 135   | 31.66  | 67.85   |
| 14   | Indiana              | 12,457  | 223   | -6.01  | -10.61  |
| 38   | Iowa                 | 1,572   | 846   | -8.92  | 0.38    |
| 32   | Kansas               | 2,551   | 478   | 35.55  | 82.74   |
| 42   | Kentucky             | 1,735   | 1,099 | -3.29  | 9.67    |
| 40   | Louisiana            | 1,971   | 943   | 15.87  | 1.7     |
| 39   | Maine                | 776     | 898   | -14.25 | 32.2    |
| 16   | Maryland             | 9,289   | 250   | -7.39  | -18.47  |
| 27   | Mass.                | 8,193   | 332   | -9.16  | -49.94  |
| 6    | Michigan             | 33,184  | 136   | -1.98  | 12.32   |
| 25   | Minnesota            | 7,173   | 321   | 7.83   | 69.53   |
| 44   | Mississippi          | 768     | 1,634 | 57.38  | 67.69   |
| 28   | Missouri             | 7,291   | 363   | -13.75 | -17.55  |
| 47   | Montana              | 153     | 2,847 | -44.96 | -63.66  |
| 48   | Nebraska             | 222     | 3,517 | 29.07  | -70.08  |
| 1    | Nevada               | 41,296  | 27    | 19.13  | 110.75  |
| 19   | New Hampshire        | 2,225   | 267   | 4.26   | 24.44   |
| 24   | New Jersey           | 11,709  | 299   | -29.17 | -10.65  |
| 41   | New Mexico           | 817     | 1,055 | 6.8    | -30.88  |
| 37   | New York             | 11,017  | 721   | 31.69  | -23.37  |
| 36   | North Carolina       | 5,988   | 689   | -19.69 | -41.77  |
| 45   | North Dakota         | 121     | 2,567 | -4.72  | 142.00  |
| 11   | Ohio                 | 31,595  | 160   | -3.14  | 1.1     |
| 34   | Oklahoma             | 2,912   | 557   | 1.68   | -10.1   |
| 10   | Oregon               | 10,547  | 153   | 29.41  | 151.00  |
| 30   | Pennsylvania         | 11,797  | 464   | 5.36   | 99.92   |
| 18   | Rhode Island         | 1,711   | 264   | -23.79 | 8.22    |
| 23   | South Carolina       | 7,016   | 288   | 27.1   | 261.84  |
| 49   | South Dakota         | 96      | 3,721 | -20.66 | 50      |
| 17   | Tennessee            | 10,362  | 263   | 2.03   | -16.36  |

|    |               |        |        |        |        |
|----|---------------|--------|--------|--------|--------|
| 29 | Texas         | 25,259 | 373    | 14.87  | -25.03 |
| 9  | Utah          | 6,143  | 151    | 12.47  | 86.77  |
| 50 | Vermont       | 21     | 14,830 | -59.62 | 600.00 |
| 13 | Virginia      | 14,725 | 222    | -10.73 | 11.97† |
| 21 | Washington    | 9,713  | 283    | 2.69   | 46.32  |
| 46 | West Virginia | 335    | 2,635  | 95.91  | 134.27 |
| 22 | Wisconsin     | 8,910  | 287    | 57.7   | 57.09  |
| 43 | Wyoming       | 217    | 1,117  | -11.07 | 32.32  |

Column 1: number of foreclosures during the month.

Column 2. 1/every X households foreclosed on during the month.

Column 3 monthly change %.

Column 4 12 month change %

Source: RealtyTrac.

<http://www.realtytrac.com/ContentManagement/pressrelease.aspx?ChannelID=9&ItemID=4586&acct=64847>



**Table 6b. Foreclosures during Q1 2009 - metropolitan areas**

|    |   |         |     |      |        |        |
|----|---|---------|-----|------|--------|--------|
| -- | U.S. Total                                    | 803,489 | 159 | 0.63 | 9.16   | 23.63  |
| 1  | Las Vegas-Paradise, NV Total                  | 35,321  | 22  | 4.48 | 18.81  | 103.93 |
| 2  | Merced, CA Total                              | 3,497   | 24  | 4.21 | 17.39  | 46.75  |
| 3  | Cape Coral-Fort Myers, FL Total               | 13,875  | 26  | 3.85 | -5.52  | 36.11  |
| 4  | Stockton, CA Total                            | 8,430   | 27  | 3.72 | 29.97  | 11.51  |
| 5  | Riverside-San Bernardino-Ontario, CA Total    | 50,885  | 28  | 3.54 | 40.94  | 36.64  |
| 6  | Modesto, CA Total                             | 5,931   | 29  | 3.42 | 29.16  | 10.57  |
| 7  | Bakersfield, CA Total                         | 7,260   | 37  | 2.70 | 26.61  | 41.99  |
| 8  | Vallejo-Fairfield, CA Total                   | 4,023   | 37  | 2.69 | 25.56  | 33.57  |
| 9  | Phoenix-Mesa-Scottsdale, AZ Total             | 41,382  | 40  | 2.48 | 6.03   | 78.87  |
| 10 | Port St. Lucie, FL Total                      | 4,439   | 46  | 2.15 | -2.61  | 64.53  |
| 11 | Sacramento--Arden-Arcade--Roseville, CA Total | 18,175  | 47  | 2.14 | 37.74  | 25.18  |
| 12 | Reno-Sparks, NV Total                         | 3,837   | 47  | 2.14 | 30.64  | 132.69 |
| 13 | Orlando-Kissimmee, FL Total                   | 17,669  | 50  | 2.00 | -4.15  | 67.92  |
| 14 | Naples-Marco Island, FL Total                 | 3,771   | 51  | 1.96 | 10.49  | 127.31 |
| 15 | Salinas, CA Total                             | 2,622   | 53  | 1.88 | 10.77  | 38.36  |
| 16 | Fresno, CA Total                              | 5,572   | 55  | 1.83 | 36.97  | 46.17  |
| 17 | Visalia-Porterville, CA Total                 | 2,308   | 59  | 1.70 | 28.51  | 82.31  |
| 18 | San Diego-Carlsbad-San Marcos, CA Total       | 17,887  | 63  | 1.58 | 35.05  | 16.79  |
| 19 | Oxnard-Thousand Oaks-Ventura, CA Total        | 3,921   | 69  | 1.44 | 47.52  | 66.14  |
| 20 | Los Angeles-Long Beach-Santa Ana, CA Total    | 59,652  | 74  | 1.35 | 41.62  | 42.82  |
| 21 | Sarasota-Bradenton-Venice, FL Total           | 4,991   | 78  | 1.28 | -6.80  | 16.10  |
| 22 | Miami-Fort Lauderdale-Pompano Beach, FL Total | 30,477  | 79  | 1.26 | -26.64 | 11.36  |
| 23 | Tampa-St. Petersburg-Clearwater, FL Total     | 16,464  | 80  | 1.25 | -11.18 | 39.40  |
| 24 | Deltona-Daytona Beach-Ormond Beach, FL Total  | 3,049   | 81  | 1.24 | -2.02  | 53.60  |
| 25 | Prescott, AZ Total                            | 1,273   | 82  | 1.22 | 35.71  | 84.23  |
| 26 | Palm Bay-Melbourne-Titusville, FL Total       | 3,143   | 84  | 1.19 | -4.47  | 36.41  |
| 27 | Boise City-Nampa, ID Total                    | 2,785   | 85  | 1.18 | 14.85  | 150.68 |
| 28 | Lakeland, FL Total                            | 3,264   | 85  | 1.18 | -18.07 | 33.33  |
| 29 | Greeley, CO Total                             | 1,078   | 86  | 1.16 | 2.57   | -23.76 |

|    |  |        |     |      |        |        |
|----|--|--------|-----|------|--------|--------|
| 30 | Santa Rosa-Petaluma, CA Total                | 2,241  | 88  | 1.14 | 5.31   | 60.30  |
| 31 | Ocala, FL Total                              | 1,806  | 88  | 1.13 | 8.34   | 63.59  |
| 32 | Fayetteville-Springdale-Rogers, AR-MO Total  | 2,051  | 89  | 1.12 | 0.64   | 71.63  |
| 33 | San Francisco-Oakland-Fremont, CA Total      | 18,285 | 92  | 1.08 | 21.08  | 23.31  |
| 34 | San Jose-Sunnyvale-Santa Clara, CA Total     | 6,732  | 94  | 1.06 | 32.62  | 41.88  |
| 35 | Atlanta-Sandy Springs-Marietta, GA Total     | 21,880 | 97  | 1.04 | 4.52   | -2.99  |
| 36 | Detroit-Warren-Livonia, MI Total             | 18,907 | 100 | 1.00 | -6.83  | -7.07  |
| 37 | Provo-Orem, UT Total                         | 1,404  | 101 | 0.99 | 25.58  | 136.76 |
| 38 | Santa Barbara-Santa Maria-Goleta, CA Total   | 1,484  | 102 | 0.98 | 36.40  | 58.89  |
| 39 | Jacksonville, FL Total                       | 5,682  | 103 | 0.97 | -8.90  | 24.69  |
| 40 | Chicago-Naperville-Joliet, IL-IN-WI Total    | 35,291 | 106 | 0.94 | 32.63  | 69.03  |
| 41 | Santa Cruz-Watsonville, CA Total             | 923    | 111 | 0.90 | 28.02  | 66.01  |
| 42 | Flint, MI Total                              | 1,683  | 117 | 0.85 | -4.43  | -2.94  |
| 43 | Memphis, TN-MS-AR Total                      | 4,638  | 118 | 0.85 | 14.15  | -6.40  |
| 44 | Canton-Massillon, OH Total                   | 1,499  | 118 | 0.84 | 20.98  | 89.03  |
| 45 | San Luis Obispo-Paso Robles, CA Total        | 969    | 119 | 0.84 | 27.33  | 124.31 |
| 46 | Toledo, OH Total                             | 2,412  | 124 | 0.81 | -12.07 | 28.50  |
| 47 | Chico, CA Total                              | 762    | 124 | 0.80 | 9.17   | 81.86  |
| 48 | Lansing-East Lansing, MI Total               | 1,555  | 126 | 0.79 | 17.80  | 19.07  |
| 49 | Columbus, OH Total                           | 6,075  | 127 | 0.79 | 7.71   | 13.81  |
| 50 | Rockford, IL Total                           | 1,117  | 129 | 0.78 | 27.51  | 30.80  |
| 51 | Charleston-North Charleston, SC Total        | 2,185  | 129 | 0.77 | 36.56  | 506.94 |
| 52 | Tucson, AZ Total                             | 3,282  | 130 | 0.77 | -8.78  | 76.07  |
| 53 | Indianapolis-Carmel, IN Total                | 5,621  | 133 | 0.75 | -6.97  | -11.20 |
| 54 | Grand Rapids-Wyoming, MI Total               | 2,377  | 134 | 0.75 | -5.82  | 37.88  |
| 55 | Cleveland-Elyria-Mentor, OH Total            | 7,043  | 134 | 0.75 | -4.22  | -21.47 |
| 56 | Pensacola-Ferry Pass-Brent, FL Total         | 1,452  | 136 | 0.74 | 4.16   | 30.69  |
| 57 | Colorado Springs, CO Total                   | 1,876  | 136 | 0.73 | -7.13  | 6.77   |
| 58 | Portland-Vancouver-Beaverton, OR-WA Total    | 6,327  | 140 | 0.71 | 39.85  | 136.26 |
| 59 | Washington-Arlington-Alexandria, DC-VA-MD-WV | 14,935 | 143 | 0.70 | -11.28 | -12.36 |
| 60 | Denver-Aurora, CO Total                      | 7,250  | 144 | 0.70 | -22.28 | -45.77 |

|    |  |       |     |      |        |        |
|----|--|-------|-----|------|--------|--------|
| 61 | Salem, OR Total                                | 982   | 149 | 0.67 | 41.91  | 151.79 |
| 62 | Salt Lake City, UT Total                       | 2,553 | 154 | 0.65 | 3.91   | 69.18  |
| 63 | Holland-Grand Haven, MI Total                  | 607   | 165 | 0.60 | 14.74  | 36.40  |
| 64 | Dayton, OH Total                               | 2,292 | 166 | 0.60 | -3.00  | -15.74 |
| 65 | Fort Wayne, IN Total                           | 1,042 | 171 | 0.59 | 6.00   | -4.32  |
| 66 | Greenville-Mauldin-Easley, SC Total            | 1,573 | 171 | 0.59 | -0.06  | 312.86 |
| 67 | Gainesville, FL Total                          | 669   | 172 | 0.58 | 29.65  | 90.06  |
| 68 | Ann Arbor, MI Total                            | 849   | 173 | 0.58 | 7.60   | 3.92   |
| 69 | Green Bay, WI Total                            | 758   | 177 | 0.56 | 117.19 | 139.87 |
| 70 | Macon, GA Total                                | 570   | 180 | 0.55 | 9.83   | -8.80  |
| 71 | Saginaw-Saginaw Township North, MI Total       | 484   | 183 | 0.55 | -5.65  | -26.56 |
| 72 | Akron, OH Total                                | 1,650 | 187 | 0.54 | -25.68 | -20.25 |
| 73 | Milwaukee-Waukesha-West Allis, WI Total        | 3,459 | 190 | 0.53 | 28.40  | 13.41  |
| 74 | Minneapolis-St. Paul-Bloomington, MN-WI Total  | 6,800 | 195 | 0.51 | 9.71   | 70.85  |
| 75 | Ogden-Clearfield, UT Total                     | 897   | 197 | 0.51 | 18.81  | 26.87  |
| 76 | Cincinnati-Middletown, OH-KY-IN Total          | 4,587 | 198 | 0.50 | -5.79  | -5.33  |
| 77 | Kalamazoo-Portage, MI Total                    | 724   | 200 | 0.50 | -18.65 | 21.07  |
| 78 | New Haven-Milford, CT Total                    | 1,746 | 200 | 0.50 | -4.54  | -24.02 |
| 79 | South Bend-Mishawaka, IN-MI Total              | 680   | 205 | 0.49 | 18.26  | 5.43   |
| 80 | Fort Collins-Loveland, CO Total                | 621   | 205 | 0.49 | 4.37   | -3.27  |
| 81 | Youngstown-Warren-Boardman, OH-PA Total        | 1,266 | 207 | 0.48 | -2.47  | -4.02  |
| 82 | Seattle-Tacoma-Bellevue, WA Total              | 6,578 | 214 | 0.47 | 1.00   | 83.13  |
| 83 | St. Louis, MO-IL Total                         | 5,582 | 221 | 0.45 | -3.19  | -15.74 |
| 84 | Olympia, WA Total                              | 449   | 224 | 0.45 | -17.61 | 63.27  |
| 85 | Bridgeport-Stamford-Norwalk, CT Total          | 1,556 | 225 | 0.44 | -5.58  | -17.15 |
| 86 | Brownsville-Harlingen, TX Total                | 632   | 227 | 0.44 | 99.37  | 27.68  |
| 87 | Manchester-Nashua, NH Total                    | 707   | 229 | 0.44 | -0.28  | 12.58  |
| 88 | Little Rock-North Little Rock-Conway, AR Total | 1,263 | 233 | 0.43 | -9.40  | -1.71  |
| 89 | Eugene-Springfield, OR Total                   | 633   | 236 | 0.42 | 18.76  | 111.71 |
| 90 | Worcester, MA Total                            | 1,336 | 237 | 0.42 | -6.83  | -46.86 |
| 91 | Kansas City, MO-KS Total                       | 3,580 | 241 | 0.42 | 5.11   | 6.52   |

|     |   |       |     |      |        |         |
|-----|---|-------|-----|------|--------|---------|
| 92  | Virginia Beach-Norfolk-Newport News, VA-NC Total      | 2,828 | 241 | 0.42 | -9.96  | 132.37  |
| 93  | Myrtle Beach-Conway-North Myrtle Beach, SC Total      | 676   | 249 | 0.40 | 436.51 | 1369.57 |
| 94  | Atlantic City, NJ Total                               | 500   | 253 | 0.40 | -26.79 | 7.53    |
| 95  | Savannah, GA Total                                    | 567   | 254 | 0.39 | 8.00   | -3.08   |
| 96  | Richmond, VA Total                                    | 2,001 | 255 | 0.39 | -2.86  | 69.29   |
| 97  | Davenport-Moline-Rock Island, IA-IL Total             | 640   | 258 | 0.39 | 50.23  | 53.11   |
| 98  | Chattanooga, TN-GA Total                              | 875   | 261 | 0.38 | 13.34  | -6.91   |
| 99  | San Antonio, TX Total                                 | 2,850 | 266 | 0.38 | 24.56  | 9.66    |
| 100 | Des Moines-West Des Moines, IA Total                  | 874   | 270 | 0.37 | 0.69   | 70.37   |
| 101 | Tulsa, OK Total                                       | 1,467 | 271 | 0.37 | 25.28  | 17.27   |
| 102 | Dallas-Fort Worth-Arlington, TX Total                 | 8,689 | 272 | 0.37 | 7.92   | -32.83  |
| 103 | Tallahassee, FL Total                                 | 583   | 272 | 0.37 | -0.85  | 40.14   |
| 104 | Augusta-Richmond County, GA-SC Total                  | 823   | 275 | 0.36 | 35.36  | -10.15  |
| 105 | Providence-New Bedford-Fall River, RI-MA Total        | 2,428 | 278 | 0.36 | -18.69 | -13.66  |
| 106 | Austin-Round Rock, TX Total                           | 2,285 | 279 | 0.36 | 22.45  | 37.32   |
| 107 | Killeen-Temple-Fort Hood, TX Total                    | 500   | 290 | 0.34 | 17.65  | 24.38   |
| 108 | Trenton-Ewing, NJ Total                               | 483   | 291 | 0.34 | -17.01 | -10.06  |
| 109 | Norwich-New London, CT Total                          | 397   | 294 | 0.34 | -16.77 | -18.65  |
| 110 | Hartford-West Hartford-East Hartford, CT Total        | 1,638 | 300 | 0.33 | -7.46  | -28.32  |
| 111 | Springfield, MO Total                                 | 603   | 304 | 0.33 | -18.07 | 86.11   |
| 112 | Reading, PA Total                                     | 515   | 311 | 0.32 | -27.67 | 25650.  |
| 113 | Nashville-Davidson--Murfreeseboro--Franklin, TN Total | 2,057 | 311 | 0.32 | -1.30  | -21.13  |
| 114 | Houston-Sugar Land-Baytown, TX Total                  | 6,877 | 316 | 0.32 | 22.00  | -44.84  |
| 115 | Boston-Cambridge-Quincy, MA-NH Total                  | 5,708 | 319 | 0.31 | -7.44  | -45.64  |
| 116 | York-Hanover, PA Total                                | 542   | 321 | 0.31 | -20.76 | 123.05  |
| 117 | Madison, WI Total                                     | 762   | 324 | 0.31 | 153.16 | 128.14  |
| 118 | Columbus, GA-AL Total                                 | 384   | 334 | 0.30 | 43.28  | -8.13   |
| 119 | Allentown-Bethlehem-Easton, PA-NJ Total               | 980   | 340 | 0.29 | 30.15  | 438.46  |
| 120 | Greensboro-High Point, NC Total                       | 917   | 341 | 0.29 | -23.77 | -13.25  |
| 121 | Mobile, AL Total                                      | 517   | 346 | 0.29 | 48.14  | -33.72  |
| 122 | Boulder, CO Total                                     | 356   | 347 | 0.29 | -4.04  | -20.18  |

|     |  |        |     |      |        |        |
|-----|--|--------|-----|------|--------|--------|
| 123 | Pittsburgh, PA Total                               | 3,145  | 352 | 0.28 | -6.51  | 89.23  |
| 124 | Philadelphia-Camden-Wilmington, PA-NJ-DE-MD Total  | 6,738  | 354 | 0.28 | 2.03   | 16.92  |
| 125 | Winston-Salem, NC Total                            | 567    | 365 | 0.27 | -16.62 | 5.19   |
| 126 | Anchorage, AK Total                                | 382    | 366 | 0.27 | -31.42 | 3.52   |
| 127 | Charlotte-Gastonia-Concord, NC-SC Total            | 1,933  | 367 | 0.27 | -15.37 | -37.60 |
| 128 | Peoria, IL Total                                   | 433    | 376 | 0.27 | 25.87  | 1.64   |
| 129 | Waco, TX Total                                     | 242    | 380 | 0.26 | 0.83   | -9.70  |
| 130 | Springfield, IL Total                              | 246    | 391 | 0.26 | 1.23   | -23.36 |
| 131 | Birmingham-Hoover, AL Total                        | 1,262  | 395 | 0.25 | 127.80 | 224.42 |
| 132 | Springfield, MA Total                              | 713    | 397 | 0.25 | -12.30 | -62.88 |
| 133 | Hagerstown-Martinsburg, MD-WV Total                | 280    | 403 | 0.25 | 1.82   | 0.00   |
| 134 | Knoxville, TN Total                                | 762    | 406 | 0.25 | -5.11  | -26.80 |
| 135 | Poughkeepsie-Newburgh-Middletown, NY Total         | 604    | 408 | 0.25 | -15.99 | 84.71  |
| 136 | Baltimore-Towson, MD Total                         | 2,707  | 409 | 0.24 | -16.06 | -35.82 |
| 137 | New Orleans-Metairie-Kenner, LA Total              | 1,065  | 414 | 0.24 | -9.44  | -6.74  |
| 138 | Appleton, WI Total                                 | 218    | 415 | 0.24 | 220.59 | 18.48  |
| 139 | Erie, PA Total                                     | 282    | 418 | 0.24 | 118.60 | 209.89 |
| 140 | El Paso, TX Total                                  | 601    | 421 | 0.24 | 65.11  | 144.31 |
| 141 | Amarillo, TX Total                                 | 228    | 431 | 0.23 | 2.24   | 4.59   |
| 142 | Montgomery, AL Total                               | 363    | 431 | 0.23 | 30.11  | 137.25 |
| 143 | Fort Smith, AR-OK Total                            | 284    | 434 | 0.23 | -7.79  | -5.02  |
| 144 | Raleigh-Cary, NC Total                             | 963    | 442 | 0.23 | 3.55   | -31.07 |
| 145 | Clarksville, TN-KY Total                           | 246    | 442 | 0.23 | 10.31  | -22.64 |
| 146 | Wichita, KS Total                                  | 583    | 443 | 0.23 | 8.36   | 66.10  |
| 147 | New York-Northern New Jersey-Long Island, NY-NJ-PA | 16,168 | 456 | 0.22 | -5.81  | -19.86 |
| 148 | Laredo, TX Total                                   | 149    | 465 | 0.22 | -15.34 | 91.03  |
| 149 | Roanoke, VA Total                                  | 300    | 465 | 0.22 | 89.87  | 417.24 |
| 150 | Honolulu, HI Total                                 | 699    | 479 | 0.21 | 11.31  | 350.97 |
| 151 | Topeka, KS Total                                   | 212    | 486 | 0.21 | 37.66  | 38.56  |
| 152 | Corpus Christi, TX Total                           | 351    | 501 | 0.20 | 23.16  | -13.33 |
| 153 | Rochester, NY Total                                | 853    | 518 | 0.19 | 19.13  | -13.66 |

|     |   |       |       |      |        |         |
|-----|---|-------|-------|------|--------|---------|
| 154 | Louisville/Jefferson County, KY-IN Total    | 1,038 | 526   | 0.19 | 18.49  | 4.32    |
| 155 | Columbia, SC Total                          | 578   | 537   | 0.19 | -20.39 | 5.09    |
| 156 | Huntsville, AL Total                        | 308   | 542   | 0.18 | 21.74  | 81.18   |
| 157 | Lancaster, PA Total                         | 347   | 559   | 0.18 | -32.62 | 236.89  |
| 158 | Albuquerque, NM Total                       | 625   | 565   | 0.18 | 11.21  | -31.54  |
| 159 | Barnstable Town, MA Total                   | 269   | 578   | 0.17 | -24.23 | -51.88  |
| 160 | McAllen-Edinburg-Mission, TX Total          | 425   | 582   | 0.17 | 8.97   | -19.35  |
| 161 | Scranton- Wilkes-Barre, PA Total            | 440   | 587   | 0.17 | 30.95  | 163.47  |
| 162 | Buffalo-Niagara Falls, NY Total             | 873   | 597   | 0.17 | -11.73 | 28.95   |
| 163 | Yakima, WA Total                            | 135   | 613   | 0.16 | 80.00  | -30.41  |
| 164 | Oklahoma City, OK Total                     | 823   | 633   | 0.16 | -13.19 | -52.29  |
| 165 | Durham, NC Total                            | 330   | 646   | 0.15 | -2.94  | -49.15  |
| 166 | Cedar Rapids, IA Total                      | 162   | 686   | 0.15 | -21.74 | -30.77  |
| 167 | Baton Rouge, LA Total                       | 449   | 714   | 0.14 | 506.76 | 27.92   |
| 168 | Champaign-Urbana, IL Total                  | 130   | 749   | 0.13 | 46.07  | -14.47  |
| 169 | Evansville, IN-KY Total                     | 212   | 753   | 0.13 | -12.03 | -37.09  |
| 170 | Bremerton-Silverdale, WA Total              | 133   | 759   | 0.13 | -63.56 | -48.45  |
| 171 | Portland-South Portland-Biddeford, ME Total | 323   | 788   | 0.13 | -11.99 | 8.03    |
| 172 | Spartanburg, SC Total                       | 150   | 805   | 0.12 | -35.90 | 11.94   |
| 173 | Duluth, MN-WI Total                         | 164   | 835   | 0.12 | -24.42 | -7.87   |
| 174 | Harrisburg-Carlisle, PA Total               | 274   | 841   | 0.12 | 91.61  | -2.14   |
| 175 | Beaumont-Port Arthur, TX Total              | 179   | 900   | 0.11 | 9.82   | -40.92  |
| 176 | Gulfport-Biloxi, MS Total                   | 117   | 917   | 0.11 | 333.33 | 1070.00 |
| 177 | Shreveport-Bossier City, LA Total           | 184   | 937   | 0.11 | 12.88  | 2.22    |
| 178 | Spokane, WA Total                           | 184   | 1,060 | 0.09 | -22.36 | -54.46  |
| 179 | Sioux Falls, SD Total                       | 83    | 1,102 | 0.09 | 0.00   | 33.87   |
| 180 | Kingsport-Bristol-Bristol, TN-VA Total      | 131   | 1,109 | 0.09 | 23.58  | -1.50   |
| 181 | Lynchburg, VA Total                         | 90    | 1,198 | 0.08 | 309.09 | 181.25  |
| 182 | Omaha-Council Bluffs, NE-IA Total           | 287   | 1,222 | 0.08 | 22.65  | -43.06  |
| 183 | Hickory-Lenoir-Morganton, NC Total          | 125   | 1,258 | 0.08 | -39.32 | -60.94  |
| 184 | Lexington-Fayette, KY Total                 | 160   | 1,267 | 0.08 | -45.39 | 4.58    |

|     |                                       |     |        |      |        |        |
|-----|---------------------------------------|-----|--------|------|--------|--------|
| 185 | Wilmington, NC Total                  | 153 | 1,279  | 0.08 | -41.15 | -57.97 |
| 186 | Albany-Schenectady-Troy, NY Total     | 287 | 1,323  | 0.08 | -6.21  | -52.80 |
| 187 | Lubbock, TX Total                     | 88  | 1,340  | 0.07 | -40.54 | 877.78 |
| 188 | Binghamton, NY Total                  | 82  | 1,348  | 0.07 | -35.43 | 3.80   |
| 189 | Huntington-Ashland, WV-KY-OH Total    | 97  | 1,365  | 0.07 | 27.63  | 212.90 |
| 190 | Fayetteville, NC Total                | 106 | 1,424  | 0.07 | -8.62  | -77.01 |
| 191 | Jackson, MS Total                     | 152 | 1,448  | 0.07 | 1.33   | -31.22 |
| 192 | College Station-Bryan, TX Total       | 52  | 1,668  | 0.06 | 23.81  | 20.93  |
| 193 | Syracuse, NY Total                    | 159 | 1,796  | 0.06 | 25.20  | -49.20 |
| 194 | Asheville, NC Total                   | 107 | 1,865  | 0.05 | -18.94 | -49.77 |
| 195 | Longview, TX Total                    | 44  | 1,926  | 0.05 | -13.73 | -2.22  |
| 196 | Lafayette, LA Total                   | 53  | 2,088  | 0.05 | 20.45  | -55.08 |
| 197 | Kennewick-Richland-Pasco, WA Total    | 34  | 2,517  | 0.04 | -35.85 | -85.71 |
| 198 | Charleston, WV Total                  | 50  | 2,907  | 0.03 | 72.41  | 0.00   |
| 199 | Tuscaloosa, AL Total                  | 22  | 4,314  | 0.02 | -8.33  | 120.00 |
| 200 | Houma-Bayou Cane-Thibodaux, LA Total  | 16  | 5,107  | 0.02 | 14.29  | 14.29  |
| 201 | Lincoln, NE Total                     | 19  | 6,488  | 0.02 | -58.70 | -93.17 |
| 202 | Utica-Rome, NY Total                  | 15  | 9,068  | 0.01 | -25.00 | -37.50 |
| 203 | Burlington-South Burlington, VT Total | 7   | 12,676 | 0.01 | -56.25 | 133.33 |

Column 1: number of foreclosures during the month.

Column 2. 1/every X households foreclosed on during the month.

Column 3 % of housing units with foreclosure filings

Column 4 monthly change %.

Column 5 12 month change %

Source: <http://www.realtytrac.com/ContentManagement/PressRelease.aspx?channelid=9&ItemID=6203>

**Table 7. #Employees on nonfarm payrolls by major industry sector, 1957 to date**

| Year | Total   | Private | Construction | Construction as % private |
|------|---------|---------|--------------|---------------------------|
| 1957 | 52,959  | 45,235  | 3,007        | 6.65%                     |
| 1958 | 51,426  | 43,480  | 2,862        | 6.58%                     |
| 1959 | 53,374  | 45,182  | 3,050        | 6.75%                     |
| 1960 | 54,296  | 45,832  | 2,973        | 6.49%                     |
| 1961 | 54,105  | 45,399  | 2,908        | 6.41%                     |
| 1962 | 55,659  | 46,655  | 2,997        | 6.42%                     |
| 1963 | 56,764  | 47,423  | 3,060        | 6.45%                     |
| 1964 | 58,391  | 48,680  | 3,148        | 6.47%                     |
| 1965 | 60,874  | 50,683  | 3,284        | 6.48%                     |
| 1966 | 64,020  | 53,110  | 3,371        | 6.35%                     |
| 1967 | 65,931  | 54,406  | 3,305        | 6.07%                     |
| 1968 | 68,023  | 56,050  | 3,410        | 6.08%                     |
| 1969 | 70,512  | 58,181  | 3,637        | 6.25%                     |
| 1970 | 71,006  | 58,318  | 3,654        | 6.27%                     |
| 1971 | 71,335  | 58,323  | 3,770        | 6.46%                     |
| 1972 | 73,798  | 60,333  | 3,957        | 6.56%                     |
| 1973 | 76,912  | 63,050  | 4,167        | 6.61%                     |
| 1974 | 78,389  | 64,086  | 4,095        | 6.39%                     |
| 1975 | 77,069  | 62,250  | 3,608        | 5.80%                     |
| 1976 | 79,502  | 64,501  | 3,662        | 5.68%                     |
| 1977 | 82,593  | 67,334  | 3,940        | 5.85%                     |
| 1978 | 86,826  | 71,014  | 4,322        | 6.09%                     |
| 1979 | 89,932  | 73,864  | 4,562        | 6.18%                     |
| 1980 | 90,528  | 74,154  | 4,454        | 6.01%                     |
| 1981 | 91,289  | 75,109  | 4,304        | 5.73%                     |
| 1982 | 89,677  | 73,695  | 4,024        | 5.46%                     |
| 1983 | 90,280  | 74,269  | 4,065        | 5.47%                     |
| 1984 | 94,530  | 78,371  | 4,501        | 5.74%                     |
| 1985 | 97,511  | 80,978  | 4,793        | 5.92%                     |
| 1986 | 99,474  | 82,636  | 4,937        | 5.97%                     |
| 1987 | 102,088 | 84,932  | 5,090        | 5.99%                     |
| 1988 | 105,345 | 87,806  | 5,233        | 5.96%                     |
| 1989 | 108,014 | 90,087  | 5,309        | 5.89%                     |
| 1990 | 109,487 | 91,072  | 5,263        | 5.78%                     |
| 1991 | 108,374 | 89,829  | 4,780        | 5.32%                     |
| 1992 | 108,726 | 89,940  | 4,608        | 5.12%                     |
| 1993 | 110,844 | 91,855  | 4,779        | 5.20%                     |



|          |         |         |       |       |
|----------|---------|---------|-------|-------|
| 1994     | 114,291 | 95,016  | 5,095 | 5.36% |
| 1995     | 117,298 | 97,866  | 5,274 | 5.39% |
| 1996     | 119,708 | 100,169 | 5,536 | 5.53% |
| 1997     | 122,776 | 103,113 | 5,813 | 5.64% |
| 1998     | 125,930 | 106,021 | 6,149 | 5.80% |
| 1999     | 128,993 | 108,686 | 6,545 | 6.02% |
| 2000     | 131,785 | 110,996 | 6,787 | 6.11% |
| 2001     | 131,826 | 110,707 | 6,826 | 6.17% |
| 2002     | 130,341 | 108,828 | 6,716 | 6.17% |
| 2003     | 129,999 | 108,416 | 6,735 | 6.21% |
| 2004     | 131,435 | 109,814 | 6,976 | 6.35% |
| 2005     | 133,703 | 111,899 | 7,336 | 6.56% |
| 2006     | 136,086 | 114,113 | 7,691 | 6.74% |
| 2007     | 137,598 | 115,380 | 7,630 | 6.61% |
| 2008 (p) | 137,068 | 114,568 | 7,215 | 6.30% |

Source: <ftp://ftp.bls.gov/pub/suppl/empsit.ceseeb1.txt>

Notes: establishment data. January 2007 data seasonally adjusted

**Table 8. Employees on non-farm payrolls by industry sector and selected industry detail (In thousands seasonally adjusted)**

|  | Sept.<br>2008 | Oct.<br>2008 | Nov.<br>2008 | Dec<br>2008 | Jan<br>2009 | Change<br>Dec 2008-<br>Jan 2009 |
|--|---------------|--------------|--------------|-------------|-------------|---------------------------------|
| Total nonfarm.....   | 135,840       | 136,352      | 135,755      | 135,178     | 134,580     | -598                            |
| Total private.....   | 114,197       | 113,813      | 113,212      | 112,645     | 112,041     | -604                            |
| Mining and logging.....  | 794           | 794          | 793          | 791         | 790         | -1                              |
| Construction.....  | 7,131         | 7,066        | 6,939        | 6,853       | 6,742       | -111                            |
| Construction of buildings.....   | 1,625.0       | 1,609.9      | 1,588.4      | 1,575.3     | 1,534.6     | -40.7                           |
| Residential building.....  | 806.5         | 795.6        | 781.7        | 770.3       | 750.0       | -20.3                           |
| Nonresidential building.....   | 818.5         | 814.3        | 806.7        | 805.0       | 784.6       | -20.4                           |
| Heavy and civil engineering<br>construction.....   | 960.2         | 952.6        | 942.5        | 934.5       | 931.5       | -3.0                            |
| Specialty trade contractors...<br>Residential specialty trade<br>contractors.....            | 4,545.4       | 4,503.9      | 4,408.5      | 4,342.8     | 4,275.6     | -67.2                           |
| Nonresidential specialty<br>trade contractors.....   | 2,000.1       | 1,975.5      | 1,921.6      | 1,884.5     | 1,843.8     | -40.7                           |
| Manufacturing.....   | 2,545.3       | 2,528.4      | 2,486.9      | 2,458.3     | 2,431.8     | -26.5                           |
| Manufacturing.....   | 13,322        | 13,203       | 13,082       | 12,920      | 12,713      | -207                            |
| Durable goods.....   | 8,392         | 8,300        | 8,216        | 8,099       | 7,942       | -157                            |
| Nondurable goods.....  | 4,930         | 4,903        | 4,866        | 4,821       | 4,771       | -50                             |
| Trade, transportation, & utilities   | 26,257        | 26,157       | 26,005       | 25,858      | 25,740      | -118                            |
| Transportation and warehousing.  | 4,471.3       | 4,456.9      | 4,424.4      | 4,396.7     | 4,353.0     | -43.7                           |
| Information.....   | 2,986         | 2,982        | 2,965        | 2,941       | 2,920       | -21                             |
| Financial activities.....  | 8,115         | 8,088        | 8,043        | 8,016       | 7,974       | -42                             |
| Professional and business<br>Management of companies and<br>Education and health services... | 18,957        | 18,981       | 19,044       | 19,089      | 19,143      | 54                              |
| Leisure and hospitality.....   | 13,428        | 13,395       | 13,344       | 13,313      | 13,285      | -28                             |
| Government.....  | 22,535        | 22,539       | 22,543       | 22,533      | 22,539      | 6                               |
| Federal.....   | 2,771         | 2,775        | 2,783        | 2,777       | 2,792       | 15                              |
| State government.....  | 5,192         | 5,194        | 5,197        | 5,193       | 5,187       | -6                              |

Source: The Employment Situation: May 2008, BLS, February, 2009 . Establishment data.

**Table 9. Construction--Establishments, Employees, Payroll,**

| Kind of business                            | NAICS Code | Number of establishments | Number of employees | Total payroll (\$000s) | Value of Construction (\$000) |
|---|------------|--------------------------|---------------------|------------------------|-------------------------------|
| Construction                                | 23         | 710,307                  | 7,193,069           | 254,292,144            | 1,196,555,587                 |
| New single-family general contractors       | 236115     | 58,488                   | 273,202             | 8,268,129              | 61,875,636                    |
| New multifamily general contractors         | 236116     | 4,370                    | 43,726              | 1,717,075              | 16,724,310                    |
| New housing operative builders              | 236117     | 26,046                   | 241,069             | 10,504,023             | 139,220,841                   |
| Residential remodelers                      | 236118     | 82,750                   | 320,208             | 8,703,503              | 45,034,336                    |
| Industrial building construction            | 236210     | 2,799                    | 95,130              | 3,959,552              | 17,514,797                    |
| Commercial building construction            | 236220     | 37,391                   | 696,056             | 29,259,594             | 241,479,835                   |
| Water and sewer system construction         | 237110     | 12,395                   | 198,622             | 7,360,570              | 32,481,745                    |
| Oil and gas pipeline construction           | 237120     | 1,418                    | 94,323              | 4,032,608              | 11,579,708                    |
| Power and communication system construction | 237130     | 5,995                    | 246,669             | 10,421,760             | 34,078,125                    |
| Land subdivision                            | 237210     | 8,444                    | 52,607              | 2,004,436              | 13,926,888                    |
| Highway, street, and bridge construction    | 237310     | 11,348                   | 410,822             | 15,654,087             | 81,412,178                    |
| Other heavy construction                    | 237990     | 10,227                   | 140,202             | 4,848,895              | 20,739,350                    |
| Poured concrete structure contractors       | 238110     | 27,149                   | 301,737             | 9,181,232              | 33,771,732                    |
| Steel and precast concrete contractors      | 238120     | 4,329                    | 76,861              | 2,905,566              | 8,723,843                     |
| Framing contractors                         | 238130     | 14,438                   | 153,636             | 4,415,319              | 14,428,519                    |
| Masonry contractors                         | 238140     | 25,763                   | 256,634             | 7,165,853              | 20,270,485                    |
| Glass and glazing contractors               | 238150     | 5,294                    | 49,840              | 1,758,140              | 6,269,870                     |
| Roofing contractors                         | 238160     | 23,222                   | 219,329             | 6,026,356              | 23,012,307                    |
| Siding contractors                          | 238170     | 6,675                    | 43,000              | 1,191,892              | 4,288,346                     |
| Other building exterior contractors         | 238190     | 2,839                    | 32,850              | 1,193,449              | 3,675,748                     |
| Electrical contractors                      | 238210     | 62,862                   | 763,949             | 29,572,975             | 82,663,284                    |
| Plumbing and HVAC contractors               | 238220     | 87,936                   | 954,095             | 36,018,541             | 118,447,213                   |
| Other building equipment contractors        | 238290     | 6,090                    | 118,606             | 4,930,208              | 14,475,660                    |

|  |        |        |         |           |            |
|--|--------|--------|---------|-----------|------------|
| Drywall and insulation contractors     | 238310 | 19,644 | 295,730 | 9,772,208 | 30,824,777 |
| Painting and wall covering contractors | 238320 | 39,025 | 232,489 | 6,014,334 | 16,868,810 |
| Flooring contractors                   | 238330 | 12,886 | 76,601  | 2,397,262 | 9,387,919  |
| Tile and terrazzo contractors          | 238340 | 8,927  | 58,774  | 1,834,142 | 5,852,769  |
| Finish carpentry contractors           | 238350 | 35,094 | 171,836 | 4,708,451 | 18,134,124 |
| Other building finishing contractors   | 238390 | 3,776  | 50,837  | 1,727,903 | 4,877,356  |
| Site preparation contractors           | 238910 | 30,589 | 284,528 | 9,769,890 | 37,754,592 |
| All other specialty trade contractors  | 238990 | 32,098 | 239,098 | 6,974,194 | 26,760,485 |

<http://www.census.gov/econ/census02/guide/SUBSUMM.HTM>

Based on the 2002 Economic Censuses

**Table 10. Construction employment in Chicago-Naperville-Joliet, IL MSA**

|                 | <b>Construct<br/>ion</b> | <b>Construction<br/>of Buildings</b> | <b>Heavy and<br/>Civil<br/>Engineering</b> | <b>Specialty<br/>Trade<br/>Contractors</b> | <b>Total<br/>Non-farm</b> | <b>Construction<br/>%</b> |
|-----------------|--------------------------|--------------------------------------|--|--|---------------------------|---------------------------|
| <b>1990</b>     | <b>150,100</b>           | <b>32,500</b>                        | <b>14,700</b>                              | <b>102,800</b>                             | <b>3,478,900</b>          | <b>4.31%</b>              |
| <b>1991</b>     | <b>138,000</b>           | <b>28,400</b>                        | <b>13,800</b>                              | <b>95,800</b>                              | <b>3,415,700</b>          | <b>4.04%</b>              |
| <b>1992</b>     | <b>131,800</b>           | <b>26,100</b>                        | <b>13,000</b>                              | <b>92,700</b>                              | <b>3,409,000</b>          | <b>3.87%</b>              |
| <b>1993</b>     | <b>132,300</b>           | <b>26,100</b>                        | <b>12,400</b>                              | <b>93,800</b>                              | <b>3,477,700</b>          | <b>3.80%</b>              |
| <b>1994</b>     | <b>136,800</b>           | <b>27,600</b>                        | <b>12,600</b>                              | <b>96,600</b>                              | <b>3,553,000</b>          | <b>3.85%</b>              |
| <b>1995</b>     | <b>141,600</b>           | <b>29,800</b>                        | <b>12,300</b>                              | <b>99,500</b>                              | <b>3,641,100</b>          | <b>3.89%</b>              |
| <b>1996</b>     | <b>145,800</b>           | <b>30,500</b>                        | <b>12,000</b>                              | <b>103,300</b>                             | <b>3,693,400</b>          | <b>3.95%</b>              |
| <b>1997</b>     | <b>149,700</b>           | <b>29,900</b>                        | <b>12,100</b>                              | <b>107,700</b>                             | <b>3,750,600</b>          | <b>3.99%</b>              |
| <b>1998</b>     | <b>155,300</b>           | <b>30,200</b>                        | <b>12,500</b>                              | <b>112,600</b>                             | <b>3,827,100</b>          | <b>4.06%</b>              |
| <b>1999</b>     | <b>166,100</b>           | <b>31,900</b>                        | <b>13,800</b>                              | <b>120,400</b>                             | <b>3,864,100</b>          | <b>4.30%</b>              |
| <b>2000</b>     | <b>175,600</b>           | <b>33,800</b>                        | <b>14,400</b>                              | <b>127,400</b>                             | <b>3,909,900</b>          | <b>4.49%</b>              |
| <b>2001</b>     | <b>179,300</b>           | <b>34,200</b>                        | <b>15,200</b>                              | <b>130,000</b>                             | <b>3,887,300</b>          | <b>4.61%</b>              |
| <b>2002</b>     | <b>180,000</b>           | <b>34,700</b>                        | <b>16,200</b>                              | <b>129,000</b>                             | <b>3,799,100</b>          | <b>4.74%</b>              |
| <b>2003</b>     | <b>178,100</b>           | <b>34,900</b>                        | <b>16,400</b>                              | <b>126,900</b>                             | <b>3,756,900</b>          | <b>4.74%</b>              |
| <b>2004</b>     | <b>174,000</b>           | <b>34,400</b>                        | <b>15,200</b>                              | <b>124,500</b>                             | <b>3,754,100</b>          | <b>4.63%</b>              |
| <b>2005</b>     | <b>173,900</b>           | <b>34,500</b>                        | <b>15,300</b>                              | <b>124,200</b>                             | <b>3,790,900</b>          | <b>4.59%</b>              |
| <b>2006</b>     | <b>174,283</b>           | <b>34,358</b>                        | <b>15,217</b>                              | <b>124,708</b>                             | <b>3,834,917</b>          | <b>4.54%</b>              |
| <b>2007</b>     | <b>174,600</b>           | <b>35,000</b>                        | <b>16,200</b>                              | <b>123,300</b>                             | <b>3,874,700</b>          | <b>4.51%</b>              |
| <b>2008 Dec</b> | <b>155,000</b>           | <b>30,300</b>                        | <b>14,000</b>                              | <b>110,700</b>                             | <b>3,854,900</b>          | <b>4.0%</b>               |

Source: annual averages <http://lmi.ides.state.il.us/cesfiles/ilceshis.htm>  
 2006 monthly average <http://lmi.ides.state.il.us/cesfiles/csmenu.htm>

**Table 11. Civilian unemployment rates by race and ethnicity, 1960–2008**  
**[Percent 1; monthly data seasonally adjusted, except as noted]**

| Year or month | All civilian workers | Males |             |                   | Females |             |                   | Both sexes 16–19 years | By race |                 |                           |                          | Hispanic or Latino ethnicity <sup>4</sup> | Married men, spouse present | Women who maintain families (NSA) <sup>3</sup> |
|---------------|----------------------|-------|-------------|-------------------|---------|-------------|-------------------|------------------------|---------|-----------------|---------------------------|--------------------------|---|-----------------------------|--|
|               |                      | Total | 16–19 years | 20 years and over | Total   | 16–19 years | 20 years and over |                        | White   | Black and other | Black or African American | Asian (NSA) <sup>3</sup> |   |                             |  |
| 1960.         | 5.5                  | 5.4   | 15.3        | 4.7               | 5.9     | 13.9        | 5.1               | 14.7                   | 5.0     | 10.2            | .....                     | .....                    | .....                                     | 3.7                         | .....  |
| 1961.         | 6.7                  | 6.4   | 17.1        | 5.7               | 7.2     | 16.3        | 6.3               | 16.8                   | 6.0     | 12.4            | .....                     | .....                    | .....                                     | 4.6                         | .....  |
| 1962.         | 5.5                  | 5.2   | 14.7        | 4.6               | 6.2     | 14.6        | 5.4               | 14.7                   | 4.9     | 10.9            | .....                     | .....                    | .....                                     | 3.6                         | .....  |
| 1963.         | 5.7                  | 5.2   | 17.2        | 4.5               | 6.5     | 17.2        | 5.4               | 17.2                   | 5.0     | 10.8            | .....                     | .....                    | .....                                     | 3.4                         | .....  |
| 1964.         | 5.2                  | 4.6   | 15.8        | 3.9               | 6.2     | 16.6        | 5.2               | 16.2                   | 4.6     | 9.6             | .....                     | .....                    | .....                                     | 2.8                         | .....  |
| 1965.         | 4.5                  | 4.0   | 14.1        | 3.2               | 5.5     | 15.7        | 4.5               | 14.8                   | 4.1     | 8.1             | .....                     | .....                    | .....                                     | 2.4                         | .....  |
| 1966.         | 3.8                  | 3.2   | 11.7        | 2.5               | 4.8     | 14.1        | 3.8               | 12.8                   | 3.4     | 7.3             | .....                     | .....                    | .....                                     | 1.9                         | .....  |
| 1967.         | 3.8                  | 3.1   | 12.3        | 2.3               | 5.2     | 13.5        | 4.2               | 12.9                   | 3.4     | 7.4             | .....                     | .....                    | .....                                     | 1.8                         | 4.9  |
| 1968.         | 3.6                  | 2.9   | 11.6        | 2.2               | 4.8     | 14.0        | 3.8               | 12.7                   | 3.2     | 6.7             | .....                     | .....                    | .....                                     | 1.6                         | 4.4  |
| 1969.         | 3.5                  | 2.8   | 11.4        | 2.1               | 4.7     | 13.3        | 3.7               | 12.2                   | 3.1     | 6.4             | .....                     | .....                    | .....                                     | 1.5                         | 4.4  |
| 1970.         | 4.9                  | 4.4   | 15.0        | 3.5               | 5.9     | 15.6        | 4.8               | 15.3                   | 4.5     | 8.2             | .....                     | .....                    | .....                                     | 2.6                         | 5.4  |
| 1971.         | 5.9                  | 5.3   | 16.6        | 4.4               | 6.9     | 17.2        | 5.7               | 16.9                   | 5.4     | 9.9             | .....                     | .....                    | .....                                     | 3.2                         | 7.3  |
| 1972.         | 5.6                  | 5.0   | 15.9        | 4.0               | 6.6     | 16.7        | 5.4               | 16.2                   | 5.1     | 10.0            | 10.4                      | .....                    | .....                                     | 2.8                         | 7.2  |
| 1973.         | 4.9                  | 4.2   | 13.9        | 3.3               | 6.0     | 15.3        | 4.9               | 14.5                   | 4.3     | 9.0             | 9.4                       | .....                    | 7.5                                       | 2.3                         | 7.1  |
| 1974.         | 5.6                  | 4.9   | 15.6        | 3.8               | 6.7     | 16.6        | 5.5               | 16.0                   | 5.0     | 9.9             | 10.5                      | .....                    | 8.1                                       | 2.7                         | 7.0  |
| 1975.         | 8.5                  | 7.9   | 20.1        | 6.8               | 9.3     | 19.7        | 8.0               | 19.9                   | 7.8     | 13.8            | 14.8                      | .....                    | 12.2                                      | 5.1                         | 10.0   |
| 1976.         | 7.7                  | 7.1   | 19.2        | 5.9               | 8.6     | 18.7        | 7.4               | 19.0                   | 7.0     | 13.1            | 14.0                      | .....                    | 11.5                                      | 4.2                         | 10.1   |
| 1977.         | 7.1                  | 6.3   | 17.3        | 5.2               | 8.2     | 18.3        | 7.0               | 17.8                   | 6.2     | 13.1            | 14.0                      | .....                    | 10.1                                      | 3.6                         | 9.4  |
| 1978.         | 6.1                  | 5.3   | 15.8        | 4.3               | 7.2     | 17.1        | 6.0               | 16.4                   | 5.2     | 11.9            | 12.8                      | .....                    | 9.1                                       | 2.8                         | 8.5  |
| 1979.         | 5.8                  | 5.1   | 15.9        | 4.2               | 6.8     | 16.4        | 5.7               | 16.1                   | 5.1     | 11.3            | 12.3                      | .....                    | 8.3                                       | 2.8                         | 8.3  |
| 1980.         | 7.1                  | 6.9   | 18.3        | 5.9               | 7.4     | 17.2        | 6.4               | 17.8                   | 6.3     | 13.1            | 14.3                      | .....                    | 10.1                                      | 4.2                         | 9.2  |
| 1981.         | 7.6                  | 7.4   | 20.1        | 6.3               | 7.9     | 19.0        | 6.8               | 19.6                   | 6.7     | 14.2            | 15.6                      | .....                    | 10.4                                      | 4.3                         | 10.4   |
| 1982.         | 9.7                  | 9.9   | 24.4        | 8.8               | 9.4     | 21.9        | 8.3               | 23.2                   | 8.6     | 17.3            | 18.9                      | .....                    | 13.8                                      | 6.5                         | 11.7   |
| 1983.         | 9.6                  | 9.9   | 23.3        | 8.9               | 9.2     | 21.3        | 8.1               | 22.4                   | 8.4     | 17.8            | 19.5                      | .....                    | 13.7                                      | 6.5                         | 12.2   |
| 1984.         | 7.5                  | 7.4   | 19.6        | 6.6               | 7.6     | 18.0        | 6.8               | 18.9                   | 6.5     | 14.4            | 15.9                      | .....                    | 10.7                                      | 4.6                         | 10.3   |
| 1985.         | 7.2                  | 7.0   | 19.5        | 6.2               | 7.4     | 17.6        | 6.6               | 18.6                   | 6.2     | 13.7            | 15.1                      | .....                    | 10.5                                      | 4.3                         | 10.4   |

|            |     |     |      |     |     |      |     |      |     |       |      |       |      |     |      |
|------------|-----|-----|------|-----|-----|------|-----|------|-----|-------|------|-------|------|-----|------|
| 1986.      | 7.0 | 6.9 | 19.0 | 6.1 | 7.1 | 17.6 | 6.2 | 18.3 | 6.0 | 13.1  | 14.5 | ..... | 10.6 | 4.4 | 9.8  |
| 1987.      | 6.2 | 6.2 | 17.8 | 5.4 | 6.2 | 15.9 | 5.4 | 16.9 | 5.3 | 11.6  | 13.0 | ..... | 8.8  | 3.9 | 9.2  |
| 1988.      | 5.5 | 5.5 | 16.0 | 4.8 | 5.6 | 14.4 | 4.9 | 15.3 | 4.7 | 10.4  | 11.7 | ..... | 8.2  | 3.3 | 8.1  |
| 1989.      | 5.3 | 5.2 | 15.9 | 4.5 | 5.4 | 14.0 | 4.7 | 15.0 | 4.5 | 10.0  | 11.4 | ..... | 8.0  | 3.0 | 8.1  |
| 1990.      | 5.6 | 5.7 | 16.3 | 5.0 | 5.5 | 14.7 | 4.9 | 15.5 | 4.8 | 10.1  | 11.4 | ..... | 8.2  | 3.4 | 8.3  |
| 1991.      | 6.8 | 7.2 | 19.8 | 6.4 | 6.4 | 17.5 | 5.7 | 18.7 | 6.1 | 11.1  | 12.5 | ..... | 10.0 | 4.4 | 9.3  |
| 1992.      | 7.5 | 7.9 | 21.5 | 7.1 | 7.0 | 18.6 | 6.3 | 20.1 | 6.6 | 12.7  | 14.2 | ..... | 11.6 | 5.1 | 10.0 |
| 1993.      | 6.9 | 7.2 | 20.4 | 6.4 | 6.6 | 17.5 | 5.9 | 19.0 | 6.1 | 11.7  | 13.0 | ..... | 10.8 | 4.4 | 9.7  |
| 1994.      | 6.1 | 6.2 | 19.0 | 5.4 | 6.0 | 16.2 | 5.4 | 17.6 | 5.3 | 10.5  | 11.5 | ..... | 9.9  | 3.7 | 8.9  |
| 1995.      | 5.6 | 5.6 | 18.4 | 4.8 | 5.6 | 16.1 | 4.9 | 17.3 | 4.9 | 9.6   | 10.4 | ..... | 9.3  | 3.3 | 8.0  |
| 1996.      | 5.4 | 5.4 | 18.1 | 4.6 | 5.4 | 15.2 | 4.8 | 16.7 | 4.7 | 9.3   | 10.5 | ..... | 8.9  | 3.0 | 8.2  |
| 1997.      | 4.9 | 4.9 | 16.9 | 4.2 | 5.0 | 15.0 | 4.4 | 16.0 | 4.2 | 8.8   | 10.0 | ..... | 7.7  | 2.7 | 8.1  |
| 1998.      | 4.5 | 4.4 | 16.2 | 3.7 | 4.6 | 12.9 | 4.1 | 14.6 | 3.9 | 7.8   | 8.9  | ..... | 7.2  | 2.4 | 7.2  |
| 1999.      | 4.2 | 4.1 | 14.7 | 3.5 | 4.3 | 13.2 | 3.8 | 13.9 | 3.7 | 7.0   | 8.0  | ..... | 6.4  | 2.2 | 6.4  |
| 2000.      | 4.0 | 3.9 | 14.0 | 3.3 | 4.1 | 12.1 | 3.6 | 13.1 | 3.5 | ..... | 7.6  | 3.6   | 5.7  | 2.0 | 5.9  |
| 2001.      | 4.7 | 4.8 | 16.0 | 4.2 | 4.7 | 13.4 | 4.1 | 14.7 | 4.2 | ..... | 8.6  | 4.5   | 6.6  | 2.7 | 6.6  |
| 2002.      | 5.8 | 5.9 | 18.1 | 5.3 | 5.6 | 14.9 | 5.1 | 16.5 | 5.1 | ..... | 10.2 | 5.9   | 7.5  | 3.6 | 8.0  |
| 2003.      | 6.0 | 6.3 | 19.3 | 5.6 | 5.7 | 15.6 | 5.1 | 17.5 | 5.2 | ..... | 10.8 | 6.0   | 7.7  | 3.8 | 8.5  |
| 2004.      | 5.5 | 5.6 | 18.4 | 5.0 | 5.4 | 15.5 | 4.9 | 17.0 | 4.8 | ..... | 10.4 | 4.4   | 7.0  | 3.1 | 8.0  |
| 2005.      | 5.1 | 5.1 | 18.6 | 4.4 | 5.1 | 14.5 | 4.6 | 16.6 | 4.4 | ..... | 10.0 | 4.0   | 6.0  | 2.8 | 7.8  |
| 2006.      | 4.6 | 4.6 | 16.9 | 4.0 | 4.6 | 13.8 | 4.1 | 15.4 | 4.0 | ..... | 8.9  | 3.0   | 5.2  | 2.4 | 7.1  |
| 2007.      | 4.6 | 4.7 | 17.6 | 4.1 | 4.5 | 13.8 | 4.0 | 15.7 | 4.1 | ..... | 8.3  | 3.2   | 5.6  | 2.5 | 6.5  |
| 2007: Jan. | 4.6 | 4.7 | 16.2 | 4.1 | 4.5 | 13.7 | 4.0 | 15.0 | 4.1 | ..... | 8.0  | 3.2   | 5.7  | 2.5 | 6.6  |
| Feb.       | 4.5 | 4.7 | 16.6 | 4.1 | 4.3 | 13.2 | 3.8 | 15.0 | 4.0 | ..... | 8.0  | 2.7   | 5.2  | 2.6 | 6.5  |
| Mar.       | 4.4 | 4.5 | 16.1 | 4.0 | 4.3 | 13.1 | 3.8 | 14.6 | 3.8 | ..... | 8.3  | 3.0   | 5.2  | 2.5 | 6.7  |
| Apr.       | 4.5 | 4.6 | 16.5 | 4.0 | 4.4 | 14.2 | 3.9 | 15.4 | 4.0 | ..... | 8.2  | 3.3   | 5.5  | 2.5 | 6.2  |
| May.       | 4.5 | 4.6 | 17.5 | 4.0 | 4.4 | 14.1 | 3.9 | 15.8 | 4.0 | ..... | 8.4  | 2.9   | 5.8  | 2.6 | 6.3  |
| June.      | 4.6 | 4.7 | 18.0 | 4.1 | 4.4 | 13.9 | 3.9 | 16.0 | 4.1 | ..... | 8.4  | 3.1   | 5.7  | 2.4 | 6.8  |
| July.      | 4.7 | 4.7 | 16.9 | 4.2 | 4.6 | 13.6 | 4.1 | 15.3 | 4.2 | ..... | 8.1  | 3.0   | 5.9  | 2.7 | 6.8  |
| Aug.       | 4.7 | 4.7 | 18.0 | 4.1 | 4.6 | 14.4 | 4.1 | 16.2 | 4.2 | ..... | 7.7  | 3.4   | 5.5  | 2.5 | 6.2  |
| Sept.      | 4.7 | 4.9 | 18.3 | 4.3 | 4.5 | 13.7 | 4.1 | 16.0 | 4.2 | ..... | 8.2  | 3.2   | 5.7  | 2.5 | 6.4  |
| Oct.       | 4.8 | 4.9 | 18.1 | 4.3 | 4.6 | 13.3 | 4.1 | 15.7 | 4.2 | ..... | 8.5  | 3.7   | 5.6  | 2.6 | 6.3  |
| Nov.       | 4.7 | 4.7 | 19.5 | 4.1 | 4.6 | 13.4 | 4.1 | 16.4 | 4.2 | ..... | 8.4  | 3.6   | 5.7  | 2.6 | 6.6  |
| Dec.       | 5.0 | 5.1 | 19.8 | 4.4 | 4.9 | 14.4 | 4.4 | 17.1 | 4.4 | ..... | 9.0  | 3.7   | 6.3  | 2.7 | 6.9  |

|            |     |     |      |     |     |      |     |      |     |       |      |     |     |     |      |
|------------|-----|-----|------|-----|-----|------|-----|------|-----|-------|------|-----|-----|-----|------|
| 2008: Jan. | 4.9 | 5.1 | 21.8 | 4.4 | 4.7 | 14.2 | 4.2 | 18.0 | 4.4 | ..... | 9.2  | 3.2 | 6.3 | 2.7 | 7.0  |
| Feb.       | 4.8 | 4.9 | 18.7 | 4.3 | 4.7 | 14.5 | 4.2 | 16.6 | 4.3 | ..... | 8.3  | 3.0 | 6.2 | 2.7 | 6.7  |
| Mar.       | 5.1 | 5.2 | 17.8 | 4.6 | 5.0 | 13.8 | 4.6 | 15.8 | 4.5 | ..... | 9.0  | 3.6 | 6.9 | 2.8 | 7.1  |
| Apr.       | 5.0 | 5.1 | 16.9 | 4.6 | 4.8 | 14.0 | 4.3 | 15.4 | 4.4 | ..... | 8.6  | 3.2 | 6.9 | 2.8 | 6.8  |
| May.       | 5.5 | 5.6 | 20.7 | 4.9 | 5.3 | 16.6 | 4.8 | 18.7 | 4.9 | ..... | 9.7  | 3.8 | 6.9 | 2.9 | 6.9  |
| June.      | 5.5 | 5.7 | 19.9 | 5.1 | 5.2 | 16.3 | 4.7 | 18.1 | 4.9 | ..... | 9.2  | 4.5 | 7.7 | 3.0 | 7.9  |
| July.      | 5.7 | 6.1 | 23.4 | 5.3 | 5.2 | 17.1 | 4.6 | 20.3 | 5.1 | ..... | 9.7  | 4.0 | 7.4 | 3.2 | 8.5  |
| Aug.       | 6.1 | 6.3 | 20.7 | 5.6 | 5.8 | 17.1 | 5.3 | 18.9 | 5.4 | ..... | 10.6 | 4.4 | 8.0 | 3.5 | 9.6  |
| Sept.      | 6.1 | 6.7 | 21.0 | 6.1 | 5.5 | 17.1 | 4.9 | 19.1 | 5.4 | ..... | 11.4 | 3.8 | 7.8 | 3.8 | 8.2  |
| Oct.       | 6.5 | 7.1 | 24.5 | 6.3 | 5.8 | 16.3 | 5.3 | 20.6 | 5.9 | ..... | 11.1 | 3.8 | 8.8 | 4.1 | 8.8  |
| Nov.       | 6.7 | 7.2 | 24.1 | 6.5 | 6.0 | 16.6 | 5.5 | 20.4 | 6.1 | ..... | 11.2 | 4.8 | 8.6 | 4.1 | 9.3  |
| Dec        | 7.2 | 7.9 | 23.3 | 7.2 | 6.4 | 18.2 | 5.9 | 20.8 | 6.6 | ..... | 11.9 | 5.1 | 9.2 | 4.4 | 9.5  |
| 2009: Jan  | 7.6 | 8.3 | 24.4 | 7.6 | 6.7 | 17.1 | 6.2 | 20.8 | 6.9 | ..... | 12.6 | 6.2 | 9.7 | 5   | 10.3 |

<sup>1</sup> Unemployed as percent of civilian labor force in group specified.

<sup>3</sup> Not seasonally adjusted (NSA).

<sup>4</sup> Persons whose ethnicity is identified as Hispanic or Latino may be of any race.

Note.—Data relate to persons 16 years of age and over.

Source: Department of Labor (Bureau of Labor Statistics). Economic Report of the President 2009, Table B42 plus The Employment Situation, January 2009, BLS



**Table 12. Labour market data and CPI, Chicago-Naperville-Joliet, IL**

|  | July    | August  | September | October | November | December |
|--|---------|---------|-----------|---------|----------|----------|
| Civilian Labor Force (1)                 | 4,226.0 | 4,157.7 | 4,104.1   | 4,046.9 | 4,068.9  | 4,062.4  |
| Employment (1)                           | 3,910.2 | 3,861.1 | 3,843.8   | 3,788.2 | 3,811.5  | 3,779.7  |
| Unemployment (1)                         | 315.8   | 296.6   | 260.3     | 258.7   | 257.5    | 282.6    |
| Unemployment Rate (2)                    | 7.5     | 7.1     | 6.3       | 6.4     | 6.3      | 7.0      |
| Non-farm Wage and Salary Employment      |         |         |           |         |          |          |
| Total Non-farm (3)                       | 3,905.2 | 3,895.5 | 3,896.2   | 3,885.8 | 3,873.0  | 3,854.9  |
| Natural Resources and Mining (3)         | 1.8     | 1.8     | 1.8       | 1.8     | 1.7      | 1.7      |
| Construction (3)                         | 176.3   | 176.4   | 174.2     | 170.9   | 165.1    | 155.0    |
| Manufacturing (3)                        | 379.6   | 378.6   | 377.7     | 375.9   | 372.3    | 370.2    |
| Trade, Transportation, and Utilities (3) | 786.0   | 784.0   | 782.5     | 781.2   | 792.0    | 795.3    |
| Information (3)                          | 84.2    | 83.9    | 83.3      | 83.3    | 82.9     | 83.0     |
| Financial Activities (3)                 | 293.5   | 293.0   | 290.9     | 289.9   | 289.6    | 289.5    |
| Professional and Business Services (3)   | 670.4   | 672.7   | 673.7     | 670.2   | 662.5    | 656.8    |
| Education and Health Services (3)        | 505.7   | 505.7   | 511.6     | 516.0   | 518.2    | 518.9    |
| Leisure and Hospitality (3)              | 352.8   | 353.7   | 348.7     | 341.6   | 333.2    | 330.2    |
| Other Services (3)                       | 177.7   | 177.4   | 173.6     | 173.3   | 173.0    | 172.9    |
| Government (3)                           | 477.2   | 468.3   | 478.2     | 481.7   | 482.5    | 481.4    |
| Chicago-Gary-Kenosha, IL-IN-WI           |         |         |           |         |          |          |
| CPI-U, All items (4)                     | 217.459 | 215.971 | 215.465   | 213.363 | 209.053  | 205.959  |
| CPI-U, All items, 12-month % change (4)  | 5.8     | 4.9     | 4.4       | 3.2     | 0.6      | -0.6     |
| CPI-W, All items (5)                     | 211.020 | 209.435 | 209.084   | 206.772 | 202.022  | 198.434  |
| CPI-W, All items, 12-month % change (5)  | 6.2     | 5.4     | 4.8       | 3.6     | 0.6      | -0.9     |

## Footnotes

(1) Number of persons, in thousands, not seasonally adjusted.

(2) In percent, not seasonally adjusted.

(3) Number of jobs, in thousands, not seasonally adjusted. See About the data.

(4) All Urban Consumers, base: 1982-84=100, not seasonally adjusted.

(5) Urban Wage Earners and Clerical Workers, base: 1982-84=100, not seasonally adjusted.

[http://www.bls.gov/eag/eag.il\\_chicago\\_md.htm](http://www.bls.gov/eag/eag.il_chicago_md.htm)

**Table 13. Construction employment and wages in the Chicago-Naperville-Joliet, IL Metropolitan Division May 2007**

|   | Employment<br>(1) | Median<br>Hourly | Mean<br>Hourly | Mean Annual<br>(2) |
|---|-------------------|------------------|----------------|--------------------|
| <b>All Occupations</b>  | 3,809,460         | \$16.79          | \$21.97        | \$45,710           |
| Construction and<br>Extraction Occupations  | 156,920           | \$30.31          | \$27.70        | \$57,610           |
| First-Line Supervisors/<br>Managers of Construction<br>Trades and Extraction<br>Workers | 8,120             | \$37.57          | \$39.15        | \$81,430           |
| Boilermakers  | 540               | \$34.66          | \$29.20        | \$60,740           |
| Brickmasons and<br>Blockmasons  | 5,290             | \$33.16          | \$30.84        | \$64,150           |
| Stonemasons   | 170               | \$34.71          | \$32.12        | \$66,810           |
| Carpenters  | 26,780            | \$31.99          | \$29.18        | \$60,700           |
| Carpet Installers   | 1,790             | \$31.40          | \$27.63        | \$57,470           |
| Tile and Marble Setters   | 1,140             | \$27.92          | \$27.56        | \$57,330           |
| Cement Masons and<br>Concrete Finishers   | 4,060             | \$32.06          | \$29.59        | \$61,540           |
| Construction Laborers   | 32,900            | \$19.30          | \$20.44        | \$42,510           |
| Paving, Surfacing, and<br>Tamping Equipment   | 850               | \$25.65          | \$26.73        | \$55,600           |

|  |        |         |         |          |
|--|--------|---------|---------|----------|
| Operators  |        |         |         |          |
| Pile-Driver Operators  | 90     | \$41.06 | \$37.69 | \$78,400 |
| Operating Engineers and Other Construction Equipment Operators | 6,240  | \$37.14 | \$35.59 | \$74,020 |
| Drywall and Ceiling Tile Installers                            | 2,150  | \$31.84 | \$27.57 | \$57,350 |
| Tapers   | 1,500  | \$31.38 | \$27.50 | \$57,200 |
| Electricians   | 17,770 | \$34.10 | \$32.23 | \$67,050 |
| Glaziers   | 720    | \$34.93 | \$33.12 | \$68,890 |
| Insulation Workers,  | 550    | \$18.96 | \$23.32 | \$48,500 |
| Floor, Ceiling, and Wall Insulation Workers, Mechanical        | 500    | \$21.65 | \$23.37 | \$48,620 |
| Painters, Construction and Maintenance                         | 6,680  | \$20.27 | \$23.55 | \$48,990 |
| Paperhangers   | 250    | \$19.56 | \$22.48 | \$46,760 |
| Pipelayers   | 380    | \$32.35 | \$31.86 | \$66,270 |
| Plumbers, Pipefitters, and Steamfitters                        | 12,940 | \$34.41 | \$31.83 | \$66,210 |
| Plasterers and Stucco Masons                                   | 330    | \$31.61 | \$32.17 | \$66,910 |

|   |       |         |         |          |
|---|-------|---------|---------|----------|
| Reinforcing Iron and Rebar Workers  | 700   | \$38.73 | \$37.48 | \$77,960 |
| Roofers   | 3,860 | \$19.50 | \$21.67 | \$45,080 |
| Sheet Metal Workers   | 4,230 | \$29.23 | \$26.61 | \$55,350 |
| Structural Iron and Steel Workers   | 1,710 | \$36.76 | \$35.49 | \$73,820 |
| Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters | 1,200 | \$18.62 | \$21.34 | \$44,380 |
| Helpers--Carpenters   | 1,780 | \$13.74 | \$17.21 | \$35,790 |
| Helpers--Electricians   | 670   | \$14.39 | \$17.39 | \$36,180 |
| Helpers--Painters, Paperhangers, Plasterers, and Stucco Masons              | 440   | \$14.76 | \$17.28 | \$35,940 |
| Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters                | 1,330 | \$17.29 | \$20.76 | \$43,180 |
| Helpers--Roofers  | 270   | \$12.60 | \$13.01 | \$27,070 |
| Helpers, Construction Trades, All Other                                     | 410   | \$30.40 | \$26.09 | \$54,260 |
| Construction and Building Inspectors  | 1,280 | \$29.15 | \$29.28 | \$60,900 |

|   |       |         |         |          |
|---|-------|---------|---------|----------|
| Elevator Installers and Repairers             | 660   | \$42.82 | \$42.75 | \$88,920 |
| Hazardous Materials Removal Workers           | 380   | \$33.12 | \$28.99 | \$60,300 |
| Highway Maintenance Workers                   | 2,400 | \$24.48 | \$23.44 | \$48,760 |
| Septic Tank Servicers and Sewer Pipe Cleaners | 760   | \$17.68 | \$18.02 | \$37,490 |

(1) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.(2) Annual wages have been calculated by multiplying the hourly mean wage by a "year-round, full-time" hours figure of 2,080 hours; for those occupations where there is not an hourly mean wage published, the annual wage has been directly calculated from the reported survey data.

Source: May 2007 Metropolitan and Non-metropolitan Area Occupational Employment and Wage Estimates  
[http://www.bls.gov/oes/current/oes\\_16974.htm#b47-0000](http://www.bls.gov/oes/current/oes_16974.htm#b47-0000)

**Table 14. Employment by sector: 1980 to 2009**

|                                    | 1980   | 1985    | 1990    | 1995    | 2000    | 2004    | 2007    | 2008<br>Jan | 2009<br>Jan |
|------------------------------------|--------|---------|---------|---------|---------|---------|---------|-------------|-------------|
| Total employed                     | 99,303 | 107,150 | 118,793 | 124,900 | 136,891 | 139,252 | 146,047 | 146,317     | 142,099     |
| Class of worker:                   |        |         |         |         |         |         |         |             |             |
| Nonagricultural industries         | 95,938 | 103,971 | 115,570 | 121,460 | 134,427 | 137,020 | 143,952 | 144,097     | 139,952     |
| Wage and salary worker             | 88,525 | 95,871  | 106,598 | 112,448 | 125,114 | 127,463 | 134,283 | 134,764     | 131,110     |
| Self-employed                      | 7,000  | 7,811   | 8,719   | 8,902   | 9,205   | 9,467   | 9,557   | 9,233       | 8,816       |
| Unpaid family workers              | 413    | 289     | 253     | 110     | 108     | 90      | 112     | n/a         | n/a         |
| Agriculture and related industries | 3,364  | 3,179   | 3,223   | 3,440   | 2,464   | 2,232   | 2,095   | 2,205       | 2149        |
| Wage and salary worker             | 1,425  | 1,535   | 1,740   | 1,814   | 1,421   | 1,242   | 1,220   | 1,254       | 1233        |
| Self-employed                      | 1,642  | 1,458   | 1,378   | 1,580   | 1,010   | 964     | 856     | 931         | 903         |
| Unpaid family workers              | 297    | 185     | 105     | 45      | 33      | 27      | 19      | n/a         | n/a         |
| Total self-employed                | 8,642  | 9,269   | 10,097  | 10,482  | 10,215  | 10,431  | 10,413  | 10,164      | 9,719       |
| % self-employed                    | 8.7%   | 8.7%    | 8.5%    | 8.4%    | 7.5%    | 7.5%    | 7.1%    | 6.9%        | 6.8%        |

Source: Statistical Abstract of the United States, 2009, Table 581

[http://www.census.gov/compendia/statab/cats/labor\\_force\\_employment\\_earnings.html](http://www.census.gov/compendia/statab/cats/labor_force_employment_earnings.html)

**Table 15. Unincorporated Self-Employed Workers by Industry and Occupation: 2000 to 2007**

|   | <b>2000</b> | <b>2001</b> | <b>2002</b> | <b>2003</b> | <b>2004</b> | <b>2005</b> | <b>2006</b> | <b>2007</b> |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Total self-employed   | 10,214      | 10,109      | 9,926       | 10,295      | 10,431      | 10,464      | 10,586      | 10,413      |
| Industry:   |             |             |             |             |             |             |             |             |
| Agriculture and related industries                              | 1,010       | 988         | 1,003       | 951         | 964         | 955         | 901         | 856         |
| Mining  | 12          | 21          | 13          | 9           | 13          | 11          | 10          | 19          |
| Construction  | 1,728       | 1,675       | 1,598       | 1,717       | 1,848       | 1,830       | 1,910       | 1,890       |
| Manufacturing   | 334         | 354         | 312         | 325         | 316         | 327         | 326         | 348         |
| Wholesale and retail trade                                      | 1,221       | 1,195       | 1,163       | 1,247       | 1,153       | 1,251       | 1,139       | 1,116       |
| Transportation and utilities                                    | 348         | 375         | 369         | 357         | 410         | 442         | 428         | 405         |
| Information   | 139         | 132         | 145         | 152         | 146         | 126         | 120         | 135         |
| Financial activities  | 735         | 697         | 675         | 736         | 792         | 785         | 841         | 829         |
| Professional and business services                              | 1,927       | 2,001       | 1,863       | 1,908       | 1,993       | 1,957       | 1,992       | 2,009       |
| Education and health services                                   | 1,107       | 1,090       | 1,119       | 1,138       | 1,105       | 1,071       | 1,158       | 1,102       |
| Leisure and hospitality   | 660         | 631         | 627         | 686         | 660         | 674         | 685         | 679         |
| Other services  | 993         | 951         | 1,041       | 1,071       | 1,031       | 1,036       | 1,076       | 1,026       |
| Occupation:   |             |             |             |             |             |             |             |             |
| Management, professional, and related                           | 4,169       | 4,085       | 4,064       | 4,176       | 4,179       | 4,085       | (NA)        | (NA)        |
| Service occupations   | 1,775       | 1,775       | 1,786       | 1,690       | 1,757       | 1,774       | (NA)        | (NA)        |
| Sales and office occupations                                    | 1,982       | 1,927       | 1,883       | 1,945       | 1,909       | 1,986       | (NA)        | (NA)        |
| Natural resources, construction, and<br>maintenance occupations | 1,591       | 1,602       | 1,503       | 1,795       | 1,847       | 1,864       | (NA)        | (NA)        |
| Production, transportation, and<br>material moving occupations  | 698         | 720         | 690         | 689         | 739         | 756         | (NA)        | (NA)        |

Source: Statistical Abstract of the United States, 2009, Table 585

[http://www.census.gov/compendia/statab/cats/labor\\_force\\_employment\\_earnings.html](http://www.census.gov/compendia/statab/cats/labor_force_employment_earnings.html)

**Table 16. Population by Race and Ethnicity in Chicago: 2000 & 2007 (%)**

|                       |             | One race only |                  |       |       | >=2 races |
|-----------------------|-------------|---------------|------------------|-------|-------|-----------|
|                       | Population  | White         | African American | Asian | Other |           |
| <b>a) 2000</b>        |             |               |                  |       |       |           |
| <b>USA</b>            | 281,421,906 | 75.1          | 12.3             | 3.6   | 6.5   | 2.4       |
| <b>Cook County</b>    | 5,376,741   | 56.3          | 26.1             | 4.8   | 10.2  | 2.5       |
| <b>Chicago city</b>   | 2,896,016   | 42.0          | 36.8             | 4.3   | 15.1  | 2.9       |
| <b>DuPage County</b>  | 904,161     | 84.0          | 3.1              | 7.9   | 3.3   | 1.7       |
| <b>Lake County</b>    | 644,356     | 80.1          | 6.9              | 3.9   | 7.0   | 2.0       |
| <b>Will County</b>    | 502,266     | 81.8          | 10.5             | 2.2   | 3.8   | 1.6       |
| <b>Kane County</b>    | 404,119     | 79.3          | 5.8              | 1.8   | 10.9  | 2.2       |
| <b>McHenry County</b> | 260,077     | 93.9          | 0.6              | 1.5   | 3.0   | 1.1       |
| <b>Illinois</b>       | 12,419,293  | 75.1          | 15.1             | 3.4   | 6.0   | 1.9       |
| <b>b) 2007</b>        |             |               |                  |       |       |           |
| <b>USA</b>            | 301,621,159 | 75.6          | 12.7             | 4.6   | 4.9   | 2.2       |
| <b>Cook County</b>    | 5,285,107   | 51.9          | 25.9             | 5.9   | 14.7  | 1.6       |
| <b>Chicago city</b>   | 2,737,996   | 37.6          | 35.5             | 5.0   | 20.2  | 1.7       |
| <b>DuPage County</b>  | 929,192     | 81.6          | 4.3              | 10.0  | 2.6   | 1.5       |
| <b>Lake County</b>    | 710,241     | 77.9          | 6.7              | 6.0   | 7.7   | 1.7       |
| <b>Will County</b>    | 673,586     | 78.3          | 10.9             | 4.0   | 5.4   | 1.4       |
| <b>Kane County</b>    | 501,021     | 76.7          | 5.5              | 3.2   | 13.0  | 1.6       |
| <b>McHenry County</b> | 315,943     | 90.6          | 1.2              | 2.7   | 4.3   | 1.2       |
| <b>Illinois</b>       | 12,852,548  | 71.6          | 14.9             | 4.4   | 8.0   | 1.1       |

Source: 2000 Census and 2007 American Community Survey



**Table 17. Population by Hispanic and non-Hispanic Origin in Illinois: 2005-2007**

|  | <b>Cook<br/>County</b> | <b>DuPage<br/>County</b> | <b>Kane<br/>County</b> | <b>Lake<br/>County</b> | <b>McHenry<br/>County</b> | <b>Will<br/>County</b> | <b>Six<br/>counties</b> | <b>City of<br/>Chicago</b> |
|--|------------------------|--------------------------|------------------------|------------------------|---------------------------|------------------------|-------------------------|----------------------------|
| Total population   | 5,288,161              | 928,086                  | 489,641                | 703,706                | 309,448                   | 654,540                | 8,373,582               | 2,740,224                  |
| Hispanic or Latino (of any race)                             | 1,188,854              | 109,647                  | 136,024                | 131,088                | 32,525                    | 89,109                 | 1,687,247               | 769,028                    |
| Mexican  | 907,571                | 85,509                   | 119,298                | 105,776                | 27,161                    | 75,945                 | 1,321,260               | 562,055                    |
| Puerto Rican   | 131,405                | 6,622                    | 6,345                  | 8,241                  | 1,721                     | 4,984                  | 159,318                 | 106,820                    |
| Cuban  | 11,645                 | 3,282                    | 1,207                  | 1,240                  | 547                       | 395                    | 18,316                  | 6,776                      |
| Other Hispanic or Latino                                     | 138,233                | 14,234                   | 9,174                  | 15,831                 | 3,096                     | 7,785                  | 188,353                 | 93,377                     |
| Not Hispanic or Latino                                       | 4,099,307              | 818,439                  | 353,617                | 572,618                | 276,923                   | 565,431                | 6,686,335               | 1,971,196                  |
| White alone  | 2,386,331              | 679,212                  | 307,520                | 477,458                | 263,111                   | 463,975                | 4,577,607               | 847,553                    |
| Black or African American alone                              | 1,346,861              | 38,167                   | 26,331                 | 46,034                 | 2,730                     | 68,676                 | 1,528,799               | 951,887                    |
| American Indian and Alaska Native alone                      | 5,649                  | 1,145                    | 216                    | 988                    | 302                       | 592                    | 8,892                   | 3,613                      |
| Asian alone  | 293,782                | 88,567                   | 14,186                 | 38,848                 | 7,922                     | 23,926                 | 467,231                 | 133,866                    |
| Native Hawaiian and Other Pacific Islander alone             | 2,027                  | 424                      | 91                     | 129                    | 0                         | 32                     | 2,703                   | 809                        |
| Some other race alone  | 15,858                 | 1,401                    | 513                    | 1,511                  | 253                       | 952                    | 20,488                  | 9,241                      |
| Two or more races  | 48,799                 | 9,523                    | 4,760                  | 7,650                  | 2,605                     | 7,278                  | 80,615                  | 24,227                     |
| Two races including Some other race                          | 4,662                  | 619                      | 553                    | 435                    | 9                         | 669                    | 6,947                   | 3,039                      |
| Two races excluding Some other race, and Three or more races | 44,137                 | 8,904                    | 4,207                  | 7,215                  | 2,596                     | 6,609                  | 73,668                  | 21,188                     |

Source: 2005-2007 American Community Surveys

**Table 18. Population by Hispanic and non-Hispanic Origin in Illinois: 2005-2007 (%)**

|  | <b>Cook County</b> | <b>DuPage County</b> | <b>Kane County</b> | <b>Lake County</b> | <b>McHenry County</b> | <b>Will County</b> | <b>Six counties</b> | <b>City of Chicago</b> |
|--|--------------------|----------------------|--------------------|--------------------|-----------------------|--------------------|---------------------|------------------------|
| Hispanic or Latino (of any race)                             | 22.5%              | 11.8%                | 27.8%              | 18.6%              | 10.5%                 | 13.6%              | 20.1%               | 28.1%                  |
| Mexican  | 17.2%              | 9.2%                 | 24.4%              | 15.0%              | 8.8%                  | 11.6%              | 15.8%               | 20.5%                  |
| Puerto Rican   | 2.5%               | 0.7%                 | 1.3%               | 1.2%               | 0.6%                  | 0.8%               | 1.9%                | 3.9%                   |
| Cuban  | 0.2%               | 0.4%                 | 0.2%               | 0.2%               | 0.2%                  | 0.1%               | 0.2%                | 0.2%                   |
| Other Hispanic or Latino                                     | 2.6%               | 1.5%                 | 1.9%               | 2.2%               | 1.0%                  | 1.2%               | 2.2%                | 3.4%                   |
| Not Hispanic or Latino                                       | 77.5%              | 88.2%                | 72.2%              | 81.4%              | 89.5%                 | 86.4%              | 79.9%               | 71.9%                  |
| White alone  | 45.1%              | 73.2%                | 62.8%              | 67.8%              | 85.0%                 | 70.9%              | 54.7%               | 30.9%                  |
| Black or African American alone                              | 25.5%              | 4.1%                 | 5.4%               | 6.5%               | 0.9%                  | 10.5%              | 18.3%               | 34.7%                  |
| American Indian and Alaska Native alone                      | 0.1%               | 0.1%                 | 0.0%               | 0.1%               | 0.1%                  | 0.1%               | 0.1%                | 0.1%                   |
| Asian alone  | 5.6%               | 9.5%                 | 2.9%               | 5.5%               | 2.6%                  | 3.7%               | 5.6%                | 4.9%                   |
| Native Hawaiian and Other Pacific Islander alone             | 0.04%              | 0.05%                | 0.02%              | 0.02%              | 0.00%                 | 0.03%              | 0.03%               | 0.03%                  |
| Some other race alone  | 0.3%               | 0.2%                 | 0.1%               | 0.2%               | 0.1%                  | 0.1%               | 0.2%                | 0.3%                   |
| Two or more races  | 0.9%               | 1.0%                 | 1.0%               | 1.1%               | 0.8%                  | 1.1%               | 1.0%                | 0.9%                   |
| Two races including Some other race                          | 0.1%               | 0.1%                 | 0.1%               | 0.1%               | 0.0%                  | 0.1%               | 0.1%                | 0.1%                   |
| Two races excluding Some other race, and Three or more races | 0.8%               | 1.0%                 | 0.9%               | 1.0%               | 0.8%                  | 1.0%               | 0.9%                | 0.8%                   |

Source: 2005-2007 American Community Surveys

**Table 19. Population by Race/Ethnicity**

|                                   |             | <b>Chicago, IL PMSA</b> | <b>Central city of:<br/>Chicago city, IL</b> | <b>Suburbs*</b> |
|-----------------------------------|-------------|-------------------------|--|-----------------|
| <b>White, Non-Hispanic</b>        | <b>1980</b> | 5,057,767               | 1,299,557                                    | 3,484,423       |
|                                   | <b>1990</b> | 4,916,250               | 1,063,281                                    | 3,584,668       |
|                                   | <b>2000</b> | 4,798,533               | 907,166                                      | 3,611,317       |
| <b>Black, Non-Hispanic</b>        | <b>1980</b> | 1,418,294               | 1,187,905                                    | 175,353         |
|                                   | <b>1990</b> | 1,410,337               | 1,076,099                                    | 271,310         |
|                                   | <b>2000</b> | 1,541,641               | 1,053,739                                    | 414,478         |
| <b>Other Races, Non-Hispanic</b>  | <b>1980</b> | 186,322                 | 95,547                                       | 82,918          |
|                                   | <b>1990</b> | 264,595                 | 109,031                                      | 143,470         |
|                                   | <b>2000</b> | 516,010                 | 181,467                                      | 308,301         |
| <b>Total Hispanic (All Races)</b> | <b>1980</b> | 583,649                 | 422,063                                      | 129,640         |
|                                   | <b>1990</b> | 819,676                 | 535,315                                      | 231,121         |
|                                   | <b>2000</b> | 1,416,584               | 753,644                                      | 549,783         |

Source: HUDS State of the Cities Data System

[http://socds.huduser.org/Census/totalpop.odt?msacitylist=1600.0\\*1700014000\\*1.0&metro=msa](http://socds.huduser.org/Census/totalpop.odt?msacitylist=1600.0*1700014000*1.0&metro=msa)

Suburb data are defined as the total for the Chicago, IL PMSA less the sum of data for these cities: Aurora city, IL ; Chicago city, IL ; DeKalb city, IL ; Elgin city, IL ; Evanston city, IL ; Joliet city, IL ; North Chicago city, IL

**Table 20. Race/Ethnicity Groups as Percent of Total Population**

|                                   |             | <b>Chicago, IL PMSA</b> | <b>Central city of:<br/>Chicago city, IL</b> | <b>Suburbs*</b> |
|-----------------------------------|-------------|-------------------------|--|-----------------|
| <b>White, Non-Hispanic</b>        | <b>1980</b> | 69.8                    | 43.2   | 90.0            |
|                                   | <b>1990</b> | 66.3                    | 38.2   | 84.7            |
|                                   | <b>2000</b> | 58.0                    | 31.3   | 73.9            |
| <b>Black, Non-Hispanic</b>        | <b>1980</b> | 19.6                    | 39.5   | 4.5             |
|                                   | <b>1990</b> | 19.0                    | 38.7   | 6.4             |
|                                   | <b>2000</b> | 18.6                    | 36.4   | 8.5             |
| <b>Other Races, Non-Hispanic</b>  | <b>1980</b> | 2.6                     | 3.2  | 2.1             |
|                                   | <b>1990</b> | 3.6                     | 3.9  | 3.4             |
|                                   | <b>2000</b> | 6.2                     | 6.3  | 6.3             |
| <b>Total Hispanic (All Races)</b> | <b>1980</b> | 8.1                     | 14.0   | 3.3             |
|                                   | <b>1990</b> | 11.1                    | 19.2   | 5.5             |
|                                   | <b>2000</b> | 17.1                    | 26.0   | 11.3            |

Source: HUDS State of the Cities Database

[http://socds.huduser.org/Census/race.odb?msacitylist=1600.0\\*1700014000\\*1.0&metro=msa](http://socds.huduser.org/Census/race.odb?msacitylist=1600.0*1700014000*1.0&metro=msa)

**Table 21. Employed Civilians, by Occupation, Sex, Race, and Hispanic Origin: 2007**

|   | Total   | Female | Black | Asian | Hispanics |
|---|---------|--------|-------|-------|-----------|
| Total, 16 years and over  | 146,047 | 46.4   | 11.0  | 4.7   | 14.0      |
| Construction and extraction occupations                                       | 9,535   | 2.7    | 6.7   | 1.2   | 29.9      |
| First-line supervisors/managers of construction trades and extraction workers | 918     | 3.2    | 3.8   | 0.7   | 15.9      |
| Brickmasons, blockmasons, and stonemasons                                     | 233     | 1.2    | 9.1   | 0.7   | 37.2      |
| Carpenters  | 1,824   | 1.9    | 5.6   | 1.8   | 26.9      |
| Carpet, floor, and tile installers and finishers                              | 258     | 2.1    | 5.1   | 1.1   | 43.3      |
| Cement masons, concrete finishers, and terrazzo workers                       | 112     | 2.2    | 12.9  | 0.4   | 52.1      |
| Construction laborers   | 1,771   | 2.7    | 8.6   | 1.7   | 44.6      |
| Operating engineers and other construction equipment operators                | 411     | 2.7    | 7.4   | 0.4   | 15.1      |
| Drywall installers, ceiling tile installers, and tapers                       | 232     | 3.6    | 3.5   | 0.2   | 53.6      |
| Electricians  | 912     | 1.7    | 5.9   | 1.2   | 14.3      |
| Painters, construction and maintenance  | 714     | 6.9    | 5.6   | 1.5   | 41.0      |
| Pipelayers, plumbers, pipefitters, and steamfitters                           | 697     | 1.5    | 8.3   | 1.0   | 23.0      |
| Roofers   | 269     | 0.9    | 4.9   | 0.1   | 45.1      |
| Sheet metal workers   | 143     | 3.7    | 4.8   | 2.2   | 15.9      |
| Structural iron and steel workers   | 88      | 0.4    | 5.2   | 2.2   | 9.6       |
| Helpers, construction trades  | 117     | 4.2    | 14.0  | 0.4   | 39.2      |
| Construction and building inspectors  | 107     | 10.0   | 7.8   | 4.1   | 8.0       |
| Highway maintenance workers   | 109     | 0.5    | 14.4  | n/a   | 19.5      |

Source: Statistical Abstract of the United States, 2009, Table 596

[http://www.census.gov/compendia/statab/cats/labor\\_force\\_employment\\_earnings.html](http://www.census.gov/compendia/statab/cats/labor_force_employment_earnings.html)

**Table 22. Employment by industry by race and gender, 2003 & 2006.**

|   | 2003, percent |       |       |          | 2006, percent |       |       |          |
|---|---------------|-------|-------|----------|---------------|-------|-------|----------|
|   | Female        | Black | Asian | Hispanic | Female        | Black | Asian | Hispanic |
| Total employed                            | 46.8          | 10.7  | 4.2   | 12.6     | 46.3          | 10.9  | 4.5   | 13.6     |
| Agriculture and related industries        | 25.5          | 2.7   | 1.0   | 19.6     | 24.6          | 2.7   | 1.2   | 19.4     |
| Mining                                    | 13.9          | 3.9   | 0.6   | 10.8     | 13.0          | 4.9   | 0.7   | 13.6     |
| <i>Construction</i>                       | 9.6           | 6.2   | 1.1   | 20.3     | 9.6           | 5.5   | 1.4   | 25.1     |
| Manufacturing                             | 30.6          | 9.4   | 5.1   | 14.2     | 29.5          | 9.5   | 5.2   | 14.7     |
| Durable goods                             | 27.1          | 8.2   | 5.4   | 11.7     | 25.8          | 8.5   | 5.8   | 12.4     |
| Nondurable goods                          | 36.2          | 11.5  | 4.7   | 18.3     | 36.1          | 11.4  | 4.2   | 18.7     |
| Wholesale trade                           | 30.0          | 6.8   | 3.7   | 13.0     | 29.0          | 6.5   | 4.1   | 13.5     |
| Retail trade                              | 48.9          | 9.7   | 4.2   | 12.3     | 48.9          | 10.1  | 4.2   | 12.7     |
| Transportation and utilities              | 24.5          | 15.7  | 3.4   | 11.8     | 24.2          | 16.5  | 3.6   | 12.7     |
| Transportation and warehousing            | 24.7          | 16.7  | 3.6   | 12.8     | 24.7          | 17.6  | 3.8   | 13.5     |
| Utilities                                 | 23.5          | 10.7  | 2.2   | 7.0      | 21.9          | 10.9  | 2.5   | 8.2      |
| Information                               | 43.5          | 11.6  | 4.5   | 8.4      | 44.4          | 11.7  | 5.2   | 9.4      |
| Financial activities                      | 55.7          | 9.8   | 4.1   | 9.0      | 55.5          | 10.2  | 5.1   | 10.0     |
| Finance and insurance                     | 59.4          | 10.3  | 4.6   | 7.9      | 58.2          | 10.5  | 5.6   | 8.5      |
| Real estate and rental and leasing        | 47.1          | 8.6   | 2.8   | 11.7     | 49.4          | 9.5   | 4.1   | 13.4     |
| Professional and business services        | 43.0          | 8.9   | 4.8   | 12.7     | 42.5          | 9.8   | 5.7   | 13.0     |
| Professional and technical services       | 44.9          | 5.7   | 6.1   | 6.5      | 44.4          | 6.4   | 7.6   | 6.2      |
| Management, administrative, and waste     | 40.2          | 13.6  | 2.9   | 21.7     | 39.8          | 14.8  | 3.0   | 22.9     |
| Education and health services             | 75.3          | 13.7  | 4.3   | 8.7      | 74.9          | 14.2  | 4.7   | 9.1      |
| Educational services                      | 69.5          | 10.6  | 3.6   | 7.8      | 68.9          | 10.8  | 3.6   | 8.5      |
| Health care and social assistance         | 79.4          | 15.9  | 4.9   | 9.3      | 79.1          | 16.7  | 5.4   | 9.5      |
| Hospitals                                 | 77.7          | 15.2  | 6.0   | 7.7      | 76.6          | 16.4  | 7.0   | 7.6      |
| Health services, except hospitals         | 78.4          | 15.5  | 4.8   | 9.0      | 78.6          | 15.3  | 5.3   | 9.5      |
| Social assistance                         | 85.9          | 18.7  | 3.1   | 13.4     | 85.4          | 21.2  | 2.9   | 12.9     |
| Leisure and hospitality                   | 51.4          | 10.8  | 5.7   | 17.9     | 51.3          | 10.5  | 5.9   | 19.4     |
| Arts, entertainment, and recreation       | 45.3          | 8.7   | 3.0   | 10.0     | 45.2          | 8.3   | 3.6   | 11.9     |
| Accommodation and food services           | 53.1          | 11.4  | 6.5   | 20.2     | 53.0          | 11.2  | 6.5   | 21.6     |
| Other services                            | 51.4          | 10.0  | 4.8   | 15.0     | 51.7          | 9.8   | 5.8   | 15.5     |
| Other services, except private households | 46.3          | 9.9   | 5.0   | 12.8     | 46.5          | 9.6   | 6.2   | 13.3     |

|                       |      |      |     |      |  |      |      |     |      |
|-----------------------|------|------|-----|------|--|------|------|-----|------|
| Private households    | 92.3 | 11.0 | 2.9 | 31.8 |  | 92.5 | 11.1 | 2.5 | 32.8 |
| Public administration | 46.4 | 16.4 | 3.3 | 8.2  |  | 45.4 | 16.2 | 3.5 | 8.6  |

Source: Statistical Abstract of the United States, 2009, Table 600

[http://www.census.gov/compendia/statab/cats/labor\\_force\\_employment\\_earnings.html](http://www.census.gov/compendia/statab/cats/labor_force_employment_earnings.html)

**Table 23. Sources of Capital Used to Start or Acquire Firm, 2002 (percent)**

|                              | Personal/<br>family<br>savings | Other<br>personal/<br>family<br>assets | Personal/<br>business<br>credit<br>card | Business<br>loan from<br>government | Government<br>guaranteed<br>bank loan | Business<br>loan<br>from<br>bank | Outside<br>investor | None<br>needed | Item<br>not<br>reported |
|------------------------------|--------------------------------|--|---|-------------------------------------|---------------------------------------|----------------------------------|---------------------|----------------|-------------------------|
| <i>a) Non-employer firms</i> |                                |  |   |                                     |                                       |                                  |                     |                |                         |
| <b>All respondent firms</b>  | <b>51.5</b>                    | <b>7.7</b>                             | <b>8.6</b>                              | <b>0.7</b>                          | <b>0.4</b>                            | <b>7.9</b>                       | <b>2.0</b>          | <b>32.9</b>    | <b>4.0</b>              |
| <b>Hispanic</b>              | <b>47.5</b>                    | <b>5.6</b>                             | <b>8.8</b>                              | <b>0.6</b>                          | <b>0.2</b>                            | <b>3.9</b>                       | <b>1.6</b>          | <b>37.6</b>    | <b>5.4</b>              |
| <b>White</b>                 | <b>51.7</b>                    | <b>7.7</b>                             | <b>8.6</b>                              | <b>0.6</b>                          | <b>0.4</b>                            | <b>8.1</b>                       | <b>1.9</b>          | <b>33.2</b>    | <b>3.5</b>              |
| <b>Black</b>                 | <b>48.1</b>                    | <b>6.4</b>                             | <b>9.5</b>                              | <b>0.9</b>                          | <b>0.3</b>                            | <b>4.4</b>                       | <b>2.0</b>          | <b>35.6</b>    | <b>6.8</b>              |
| <b>Native American</b>       | <b>49.5</b>                    | <b>8.8</b>                             | <b>11.7</b>                             | <b>0.7</b>                          | <b>0.5</b>                            | <b>5.9</b>                       | <b>1.7</b>          | <b>34.1</b>    | <b>5.3</b>              |
| <b>Asian</b>                 | <b>56.0</b>                    | <b>7.1</b>                             | <b>9.2</b>                              | <b>0.7</b>                          | <b>0.3</b>                            | <b>6.1</b>                       | <b>2.5</b>          | <b>29.5</b>    | <b>4.0</b>              |
| <b>Islander</b>              | <b>51.0</b>                    | <b>8.3</b>                             | <b>11.4</b>                             | <b>S</b>                            | <b>S</b>                              | <b>3.2</b>                       | <b>1.9</b>          | <b>33.2</b>    | <b>3.3</b>              |
| <b>Female</b>                | <b>45.1</b>                    | <b>5.8</b>                             | <b>8.8</b>                              | <b>0.5</b>                          | <b>0.2</b>                            | <b>3.5</b>                       | <b>1.2</b>          | <b>41.6</b>    | <b>4.4</b>              |
| <b>Male</b>                  | <b>52.3</b>                    | <b>7.4</b>                             | <b>8.1</b>                              | <b>0.6</b>                          | <b>0.4</b>                            | <b>8.8</b>                       | <b>2.2</b>          | <b>32.1</b>    | <b>3.7</b>              |
| <b>Equally owned</b>         | <b>66.9</b>                    | <b>14.0</b>                            | <b>11.3</b>                             | <b>1.2</b>                          | <b>0.8</b>                            | <b>14.8</b>                      | <b>2.5</b>          | <b>14.6</b>    | <b>1.5</b>              |
| <b>Publicly held</b>         | <b>25.6</b>                    | <b>8.2</b>                             | <b>1.6</b>                              | <b>2.4</b>                          | <b>1.0</b>                            | <b>11.4</b>                      | <b>12.8</b>         | <b>17.8</b>    | <b>32.0</b>             |
| <i>b) Employer Firms</i>     |                                |  |   |                                     |                                       |                                  |                     |                |                         |
| <b>All respondent firms</b>  | <b>64.2</b>                    | <b>13.1</b>                            | <b>9.2</b>                              | <b>1.7</b>                          | <b>1.7</b>                            | <b>22.2</b>                      | <b>4.7</b>          | <b>11.8</b>    | <b>3.7</b>              |
| <b>Hispanic</b>              | <b>71.0</b>                    | <b>12.7</b>                            | <b>12.8</b>                             | <b>1.8</b>                          | <b>1.5</b>                            | <b>14.8</b>                      | <b>3.3</b>          | <b>8.7</b>     | <b>3.2</b>              |
| <b>White</b>                 | <b>67.1</b>                    | <b>13.8</b>                            | <b>9.5</b>                              | <b>1.6</b>                          | <b>1.7</b>                            | <b>23.1</b>                      | <b>4.1</b>          | <b>10.3</b>    | <b>2.6</b>              |
| <b>Black</b>                 | <b>69.0</b>                    | <b>13.1</b>                            | <b>15.0</b>                             | <b>2.9</b>                          | <b>2.7</b>                            | <b>17.6</b>                      | <b>3.7</b>          | <b>9.3</b>     | <b>4.0</b>              |
| <b>Native American</b>       | <b>67.2</b>                    | <b>17.1</b>                            | <b>15.0</b>                             | <b>2.6</b>                          | <b>2.8</b>                            | <b>20.0</b>                      | <b>4.4</b>          | <b>9.9</b>     | <b>2.5</b>              |
| <b>Asian</b>                 | <b>74.8</b>                    | <b>13.3</b>                            | <b>10.4</b>                             | <b>1.7</b>                          | <b>2.0</b>                            | <b>20.1</b>                      | <b>4.4</b>          | <b>5.8</b>     | <b>2.8</b>              |
| <b>Islander</b>              | <b>62.1</b>                    | <b>22.7</b>                            | <b>20.6</b>                             |                                     |                                       | <b>17.3</b>                      | <b>3.3</b>          | <b>9.4</b>     | <b>3.8</b>              |
| <b>Female</b>                | <b>67.5</b>                    | <b>14.5</b>                            | <b>11.9</b>                             | <b>1.9</b>                          | <b>2.0</b>                            | <b>19.5</b>                      | <b>3.8</b>          | <b>10.6</b>    | <b>2.6</b>              |
| <b>Male</b>                  | <b>66.6</b>                    | <b>12.6</b>                            | <b>8.7</b>                              | <b>1.4</b>                          | <b>1.5</b>                            | <b>23.1</b>                      | <b>4.2</b>          | <b>10.7</b>    | <b>2.9</b>              |
| <b>Equally owned</b>         | <b>72.1</b>                    | <b>18.5</b>                            | <b>11.6</b>                             | <b>2.2</b>                          | <b>2.7</b>                            | <b>25.6</b>                      | <b>4.0</b>          | <b>5.8</b>     | <b>1.7</b>              |
| <b>Publicly held</b>         | <b>26.9</b>                    | <b>6.1</b>                             | <b>3.3</b>                              | <b>2.6</b>                          | <b>.2</b>                             | <b>15.0</b>                      | <b>11.4</b>         | <b>31.5</b>    | <b>15.8</b>             |

Data source: U.S. Census Bureau, 2002 Survey of Business Owners, Characteristics of Businesses, released September 27, 2006. 'Minorities in Business: A Demographic Review of Minority Business Ownership', Office of Advocacy, U.S. Small Business Administration, 2007 <http://www.sba.gov/advo/research/rs298tot.pdf>



**Table 24. Ownership of firms, 1997 and 2002**

|          | # firms    |            | Average Sales (\$000s) |       |
|----------|------------|------------|------------------------|-------|
|          | 2002       | 1997       | 2002                   | 1997  |
| All      | 22,974,685 | 20,821,935 | \$985                  | \$891 |
| Female   | 6,489,483  | 5,417,034  | \$145                  | \$151 |
| Hispanic | 1,573,600  | 1,199,896  | \$141                  | \$155 |
| Black    | 1,197,661  | 823,499    | \$74                   | \$86  |
| Asian    | 1,104,189  | 912,960    | \$296                  | \$336 |

|          | % with employees |       | Average # employees |      |
|----------|------------------|-------|---------------------|------|
|          | 2002             | 1997  | 2002                | 1997 |
| All      | 24.1%            | 25.4% | 4.8                 | 5.0  |
| Female   | 14.1%            | 15.6% | 1.1                 | 1.3  |
| Hispanic | 12.7%            | 17.7% | 1.0                 | 1.2  |
| Black    | 7.9%             | 11.3% | 0.6                 | 0.9  |
| Asian    | 28.9%            | 31.8% | 2.0                 | 2.4  |

|              | # firms   |           | Average Sales (\$000s) |       |
|--------------|-----------|-----------|------------------------|-------|
|              | 2002      | 1997      | 2002                   | 1997  |
| Construction | 2,780,324 | 2,333,424 | \$477                  | \$405 |
| Female       | 201,791   | 157,173   | \$339                  | \$430 |
| Hispanic     | 212,496   | 152,573   | \$147                  | \$144 |
| Black        | 75,020    | 56,508    | \$128                  | \$136 |
| Asian        | 38,742    | 27,711    | \$250                  | \$270 |

|              | % with employees |       | Average # employees |      |
|--------------|------------------|-------|---------------------|------|
|              | 2002             | 1997  | 2002                | 1997 |
| Construction | 26.3%            | 28.9% | 9.6                 | 8.4  |
| Female       | 25.6%            | 41.8% | 8.8                 | 7.9  |
| Hispanic     | 11.8%            | 20.6% | 7.6                 | 5.4  |
| Black        | 11.6%            | 23.0% | 6.3                 | 5.5  |
| Asian        | 19.1%            | 23.1% | 6.3                 | 6.6  |

Source: 1997 and 2002 CBO – see Data Appendix Tables 2 and 3 below

**Table 25. Self-employment as a % of all civilian employment**

| Country        | 1960 | 1970 | 1980 | 2000 | 2004 | 2007 |
|----------------|------|------|------|------|------|------|
| Australia      |      | 13.8 | 16.5 | 14.0 | 13.1 | 12.0 |
| Austria        |      | 13.8 | 16.5 | 14.0 | 13.1 | 12.0 |
| Belgium        | 26.2 | 18.8 | 16.6 | 16.0 | 14.7 | 14.8 |
| Canada         |      |      | 9.1  | 10.6 | 9.5  | 9.3  |
| Czech Republic |      |      |      | 15.2 | 16.9 | 16.2 |
| Denmark        |      | 20.6 |      | 8.7  | 8.7  | 8.9  |
| Finland        |      |      | 17.2 | 13.7 | 12.8 | 12.6 |
| France         | 30.6 | 21.6 | 16.3 | 9.2  | 8.9  | 8.9  |
| Germany        | 22.8 |      | 11.9 | 11.0 | 12.1 | 12.0 |
| Greece         | 68.5 |      |      | 42.0 | 36.6 | 35.9 |
| Hungary        |      |      |      | 15.2 | 14.3 | 12.5 |
| Iceland        |      |      |      | 18.0 | 14.1 | 13.7 |
| Ireland        | 38.7 |      | 24.8 | 18.9 | 18.0 | 16.8 |
| Italy          |      |      | 28.6 | 28.5 | 28.4 | 26.4 |
| Japan          | 46.6 | 35.0 | 28.1 | 16.6 | 14.9 | 13.4 |
| Korea          |      | 61.1 | 52.8 | 36.8 | 34.0 | 31.8 |
| Luxembourg     | 28.7 | 19.8 | 13.5 | 7.4  | 6.7  | 6.1  |
| Mexico         |      |      |      | 36.0 | 36.5 | 34.3 |
| Netherlands    |      |      | 12.2 | 11.2 | 12.1 | 13.1 |
| Norway         | 25.7 | 19.6 | 14.3 | 7.4  | 7.4  | 8.0  |
| Poland         | 41   | 30.8 | 25.4 | 27.4 | 26.7 | 23.5 |
| Portugal       |      |      |      | 26.1 | 25.9 | 24.2 |
| Slovakia       |      |      |      | 8.0  | 12.0 | 12.9 |
| Spain          |      | 36.0 | 29.6 | 20.2 | 18.1 | 17.7 |
| Sweden         |      | 10.9 | 8    | 10.3 | 9.9  | 10.6 |
| Switzerland    |      |      |      | 13.2 | 11.4 | 11.5 |
| Turkey         |      |      |      | 51.4 | 49.2 | 41.9 |
| United Kingdom |      |      |      | 12.8 | 13.6 | 13.8 |
| USA            | 16.1 | 10.2 | 9.4  | 7.4  | 7.6  | 7.2  |
| OECD           |      |      |      | 17.6 | 17.3 | 16.1 |

Source: OECD Labour Force Statistics.

**Table 26. Self-employment rates 1983-2006: by race and gender (%) – all industries (weighted)**

|      | White<br>female | White<br>male | Black | Native<br>American | Asian/<br>Pacific<br>Islander | Hispanics |
|------|-----------------|---------------|-------|--------------------|-------------------------------|-----------|
| 1983 | 7.1%            | 15.7%         | 3.5%  |                    |                               | 7.1%      |
| 1984 | 7.4%            | 15.5%         | 3.6%  |                    |                               | 7.8%      |
| 1985 | 7.1%            | 15.7%         | 3.5%  |                    |                               | 7.1%      |
| 1986 | 7.2%            | 15.3%         | 3.5%  |                    |                               | 7.8%      |
| 1987 | 7.5%            | 15.5%         | 3.7%  |                    |                               | 7.9%      |
| 1988 | 7.8%            | 15.6%         | 3.7%  |                    |                               | 8.2%      |
| 1989 | 7.9%            | 15.7%         | 4.1%  | 8.9%               | 11.3%                         | 7.7%      |
| 1990 | 7.9%            | 15.7%         | 4.1%  | 8.9%               | 11.3%                         | 7.7%      |
| 1991 | 7.9%            | 15.8%         | 4.0%  | 9.1%               | 12.2%                         | 7.3%      |
| 1992 | 7.7%            | 15.8%         | 3.8%  | 8.3%               | 11.5%                         | 6.5%      |
| 1993 | 7.9%            | 16.0%         | 3.9%  | 9.4%               | 11.7%                         | 7.0%      |
| 1994 | 9.5%            | 16.0%         | 4.5%  | 9.7%               | 12.3%                         | 8.5%      |
| 1995 | 9.8%            | 15.7%         | 4.7%  | 7.4%               | 11.4%                         | 6.6%      |
| 1996 | 8.8%            | 14.9%         | 4.0%  | 7.1%               | 10.8%                         | 6.2%      |
| 1997 | 9.0%            | 14.9%         | 3.8%  | 7.9%               | 10.9%                         | 6.1%      |
| 1998 | 8.6%            | 14.6%         | 3.9%  | 7.1%               | 11.0%                         | 5.8%      |
| 1999 | 8.3%            | 14.0%         | 4.1%  | 6.8%               | 10.6%                         | 6.1%      |
| 2000 | 8.2%            | 13.8%         | 4.4%  | 6.3%               | 9.5%                          | 5.6%      |
| 2001 | 8.1%            | 13.5%         | 4.2%  | 7.4%               | 10.2%                         | 5.7%      |
| 2002 | 8.0%            | 13.6%         | 4.2%  | 6.7%               | 9.1%                          | 5.8%      |
| 2003 | 8.3%            | 14.4%         | 4.6%  | 7.0%               | 10.0%                         | 6.5%      |
| 2004 | 8.3%            | 14.5%         | 4.6%  | 6.5%               | 10.8%                         | 6.8%      |
| 2005 | 8.9%            | 15.3%         | 5.4%  | 7.6%               | 10.9%                         | 7.2%      |
| 2006 | 8.9%            | 15.2%         | 5.5%  | 8.2%               | 11.9%                         | 7.6%      |
| 2007 | 9.0%            | 15.7%         | 5.4%  | 8.0%               | 11.4%                         | 8.0%      |
| 2008 | 8.8%            | 15.5%         | 5.8%  | 8.2%               | 10.8%                         | 8.2%      |

Source: Basic Monthly files of the Current Population Surveys (weighted)

Notes: workers only so the self-employment rate is defined as being one if self-employed, zero if an employee.

**Table 27. Self-employment rates 1983-2006: by race and gender (%) – construction (weighted)**

|      | White<br>female | White<br>male | Black | Native<br>American | Asian/<br>Pacific Islander | Hispanics |
|------|-----------------|---------------|-------|--------------------|----------------------------|-----------|
| 1983 | 13.1%           | 24.3%         | 10.0% |                    |                            | 11.1%     |
| 1984 | 16.2%           | 23.9%         | 12.7% |                    |                            | 12.4%     |
| 1985 | 15.1%           | 24.4%         | 12.2% |                    |                            | 12.4%     |
| 1986 | 14.6%           | 24.4%         | 13.0% |                    |                            | 12.7%     |
| 1987 | 15.2%           | 24.9%         | 13.2% |                    |                            | 12.4%     |
| 1988 | 16.8%           | 25.4%         | 11.6% |                    |                            | 13.2%     |
| 1989 | 18.8%           | 25.2%         | 11.3% | 16.5%              | 13.3%                      | 13.9%     |
| 1990 | 18.9%           | 26.0%         | 15.7% | 18.2%              | 12.4%                      | 11.4%     |
| 1991 | 18.6%           | 26.4%         | 17.3% | 19.6%              | 18.2%                      | 12.8%     |
| 1992 | 19.6%           | 27.1%         | 15.8% | 15.2%              | 15.7%                      | 14.3%     |
| 1993 | 22.0%           | 28.3%         | 15.0% | 17.2%              | 14.1%                      | 15.6%     |
| 1994 | 28.9%           | 28.0%         | 14.2% | 17.7%              | 18.0%                      | 14.1%     |
| 1995 | 26.2%           | 26.7%         | 13.5% | 10.5%              | 21.7%                      | 13.2%     |
| 1996 | 25.0%           | 26.6%         | 13.9% | 16.1%              | 21.7%                      | 13.0%     |
| 1997 | 24.2%           | 26.7%         | 14.3% | 18.8%              | 20.8%                      | 12.1%     |
| 1998 | 23.5%           | 27.1%         | 14.0% | 19.7%              | 19.6%                      | 10.5%     |
| 1999 | 20.7%           | 26.2%         | 13.8% | 12.5%              | 18.2%                      | 12.1%     |
| 2000 | 20.9%           | 26.0%         | 14.8% | 11.7%              | 17.6%                      | 11.1%     |
| 2001 | 22.9%           | 24.7%         | 13.0% | 18.4%              | 19.6%                      | 10.0%     |
| 2002 | 22.2%           | 24.9%         | 12.1% | 11.9%              | 16.1%                      | 9.4%      |
| 2003 | 21.5%           | 27.1%         | 17.7% | 16.9%              | 17.6%                      | 11.7%     |
| 2004 | 20.1%           | 28.1%         | 17.1% | 15.1%              | 23.0%                      | 14.3%     |
| 2005 | 20.8%           | 27.2%         | 19.5% | 16.2%              | 24.6%                      | 13.0%     |
| 2006 | 22.7%           | 27.8%         | 19.1% | 17.6%              | 24.4%                      | 13.2%     |
| 2007 | 21.8%           | 29.3%         | 19.0% | 19.6%              | 23.6%                      | 14.0%     |
| 2008 | 21.8%           | 30.2%         | 23.7% | 19.7%              | 22.7%                      | 15.8%     |

Source: Basic Monthly Surveys of the Current Population Surveys

Notes: workers only so the self-employment rate is defined as being one if self-employed, zero if an employee.

**Table 28. Regression adjusted race and gender effects - all industries**

|      | White female | Black  | Native<br>Americans | Asians/<br>Pacific<br>islanders | Hispanics |
|------|--------------|--------|---------------------|---------------------------------|-----------|
| 1983 | -.0627       | -.0800 |                     |                                 | -.0506    |
| 1984 | -.0600       | -.0788 |                     |                                 | -.0441    |
| 1985 | -.0560       | -.0761 |                     |                                 | -.0428    |
| 1986 | -.0561       | -.0758 |                     |                                 | -.0389    |
| 1987 | -.0545       | -.0762 |                     |                                 | -.0396    |
| 1988 | -.0535       | -.0773 |                     |                                 | -.0404    |
| 1989 | -.0505       | -.0776 |                     |                                 | -.0443    |
| 1990 | -.0515       | -.0738 |                     |                                 | -.0376    |
| 1991 | -.0517       | -.0745 |                     |                                 | -.0419    |
| 1992 | -.0507       | -.0752 | -.0447              | -.0279                          | -.0495    |
| 1993 | -.0505       | -.0742 | -.0418              | -.0271                          | -.0462    |
| 1994 | -.0408       | -.0815 | -.0492              | -.0235                          | -.0413    |
| 1995 | -.0368       | -.0761 | -.0580              | -.0262                          | -.0540    |
| 1996 | -.0377       | -.0737 | -.0529              | -.0270                          | -.0533    |
| 1997 | -.0356       | -.0740 | -.0439              | -.0280                          | -.0529    |
| 1998 | -.0354       | -.0704 | -.0463              | -.0240                          | -.0516    |
| 1999 | -.0359       | -.0668 | -.0415              | -.0231                          | -.0475    |
| 2000 | -.0352       | -.0613 | -.0490              | -.0286                          | -.0495    |
| 2001 | -.0331       | -.0603 | -.0435              | -.0232                          | -.0468    |
| 2002 | -.0333       | -.0603 | -.0483              | -.0288                          | -.0419    |
| 2003 | -.0367       | -.0630 | -.0453              | -.0297                          | -.0454    |
| 2004 | -.0385       | -.0636 | -.0504              | -.0283                          | -.0463    |
| 2005 | -.0369       | -.0610 | -.0478              | -.0269                          | -.0462    |
| 2006 | -.0366       | -.0599 | -.0443              | -.0204                          | -.0444    |
| 2007 | -.0555       | -.0715 | -.0561              | -.0392                          | -.0515    |
| 2008 | -.0554       | -.0683 | -.0534              | -.0391                          | -.0505    |

Source: Basic Monthly Surveys of the Current Population Surveys - [http://www.nber.org/data/cps\\_basic.html](http://www.nber.org/data/cps_basic.html) & [http://www.bls.census.gov/cps\\_ftp.html#cpsbasic](http://www.bls.census.gov/cps_ftp.html#cpsbasic)

Notes: these are the estimated coefficients from separate dprobits for each year. Controls include age and its square, 50 state dummies and fifteen schooling dummies thereafter. All coefficients significant well above conventional levels.

**Table 29. Regression adjusted race and gender effects – construction**

|      | White female | Black  | Native<br>Americans | Asians/<br>Pacific<br>islanders | Hispanics |
|------|--------------|--------|---------------------|---------------------------------|-----------|
| 1983 | -.1133       | -.1237 |                     |                                 | -.0977    |
| 1984 | -.0935       | -.1013 |                     |                                 | -.0823    |
| 1985 | -.1039       | -.1124 |                     |                                 | -.0650    |
| 1986 | -.1024       | -.1117 |                     |                                 | -.0639    |
| 1987 | -.1024       | -.1085 |                     |                                 | -.0799    |
| 1988 | -.1043       | -.1242 |                     |                                 | -.0678    |
| 1989 | -.0876       | -.1247 |                     |                                 | -.0558    |
| 1990 | -.0813       | -.1053 |                     |                                 | -.0853    |
| 1991 | -.0829       | -.0859 |                     |                                 | -.0804    |
| 1992 | -.0935       | -.0993 | -.1055              | -.1354                          | -.0685    |
| 1993 | -.0827       | -.1153 | -.0815              | -.1545                          | -.0609    |
| 1994 | -.0013       | -.1299 | -.1016              | -.1095                          | -.0817    |
| 1995 | -.0140       | -.1268 | -.1659              | -.0361                          | -.1017    |
| 1996 | -.0373       | -.1136 | -.1086              | -.0923                          | -.0943    |
| 1997 | -.0406       | -.1144 | -.0804              | -.0912                          | -.0953    |
| 1998 | -.0462       | -.1211 | -.0598              | -.0912                          | -.1217    |
| 1999 | -.0532       | -.1126 | -.0976              | -.1017                          | -.0971    |
| 2000 | -.0547       | -.0958 | -.1344              | -.0902                          | -.0967    |
| 2001 | -.0369       | -.1048 | -.0644              | -.0818                          | -.0993    |
| 2002 | -.0386       | -.1094 | -.0977              | -.1007                          | -.1035    |
| 2003 | -.0670       | -.0953 | -.0834              | -.1170                          | -.1103    |
| 2004 | -.0789       | -.0939 | -.1089              | -.0741                          | -.0841    |
| 2005 | -.0674       | -.0761 | -.1027              | -.0698                          | -.0928    |
| 2006 | -.0652       | -.0718 | -.1089              | -.0837                          | -.1050    |
| 2007 | -.0864       | -.0827 | -.0675              | -.0453                          | -.0925    |
| 2008 | -.0554       | -.0683 | -.0534              | -.0391                          | -.0506    |

Source: Basic Monthly Surveys of the Current Population Surveys – [http://www.nber.org/data/cps\\_basic.html](http://www.nber.org/data/cps_basic.html) & <http://www.bls.census.gov/cps ftp.html#cpsbasic>

Notes: these are the estimated coefficients from separate dprobits for each year. Controls include age and its square, 50 state dummies and fifteen schooling dummies thereafter.

All coefficients significant well above conventional levels.

**Table 30. Distribution of employment and self-employment in Chicago and Chicago construction 2006-2008 (%)**

|   | White females | White males | Blacks | Asians | Hispanics | Others |
|---|---------------|-------------|--------|--------|-----------|--------|
| 1. % Chicago employment                         | 28.5          | 33.2        | 14.5   | 6.5    | 16.3      | 1.0    |
|   | (32.0)        | (37.1)      | (11.0) | (4.9)  | (13.0)    | (2.1)  |
| 2. % of self-employed in Chicago                | 23.7          | 53.1        | 7.9    | 7.3    | 7.1       | 1.0    |
|   | (26.2)        | (52.2)      | (5.6)  | (5.1)  | (9.3)     | (1.7)  |
| 3. % all Chicago construction occupations       | 9.0           | 57.5        | 7.1    | 1.3    | 23.5      | 1.6    |
|   | (7.5)         | (58.7)      | (6.1)  | (1.7)  | (23.4)    | (2.6)  |
| 4. % self-employed in Chicago construction      | 9.9           | 77.4        | 3.5    | 1.8    | 5.8       | 1.6    |
|   | (7.0)         | (70.8)      | (4.7)  | (1.6)  | (13.7)    | (2.2)  |
| 5. Self-employment rate in Chicago              | 7.8           | 15.4        | 5.2    | 10.7   | 4.2       | 9.6    |
|   | (9.0)         | (15.6)      | (5.6)  | (11.5) | (7.9)     | (9.0)  |
| 6. Self-employment rate in Chicago construction | 23.8          | 29.7        | 10.9   | 31.3   | 5.6       | 23.2   |
|   | (22.5)        | (29.5)      | (20.5) | (24.0) | (14.3)    | (21.7) |
| 7. Chicago unemployed                           | 19.0          | 24.9        | 33.3   | 5.2    | 16.5      | 1.1    |
|   | (25.5)        | (29.9)      | (22.2) | (3.6)  | (15.3)    | (3.5)  |

Notes: weighted by person weights. Source: BMCPS 2006-2008. Numbers in parentheses are the national equivalents

**Table 31. Distribution of employment by race, 1980-2007/8**

|                        | Self-employed<br>All Industries | Self-employed<br>Construction | Employees<br>Construction |
|------------------------|---------------------------------|-------------------------------|---------------------------|
| <i>2007 &amp; 2008</i> |                                 |                               |                           |
| White female           | 26.1                            | 6.8                           | 8.0                       |
| White male             | 51.0                            | 70.7                          | 55.2                      |
| Blacks                 | 5.9                             | 4.8                           | 5.9                       |
| Asians                 | 5.3                             | 1.7                           | 1.9                       |
| Hispanics              | 10.1                            | 14.0                          | 26.6                      |
| MBEs                   | 22.9                            | 22.5                          | 36.7                      |
| MWBEs                  | 49.0                            | 29.3                          | 44.7                      |
| <i>2000</i>            |                                 |                               |                           |
| White female           | 26.4                            | 6.6                           | 8.9                       |
| White male             | 49.6                            | 71.5                          | 59.8                      |
| Blacks                 | 9.0                             | 8.7                           | 8.1                       |
| Asians                 | 6.0                             | 1.1                           | 1.2                       |
| Hispanics              | 8.0                             | 10.5                          | 20.5                      |
| MBEs                   | 24.0                            | 21.9                          | 31.3                      |
| MWBEs                  | 50.4                            | 28.5                          | 40.2                      |
| <i>1990</i>            |                                 |                               |                           |
| White female           | 26.2                            | 7.4                           | 9.7                       |
| White male             | 56.9                            | 81.6                          | 70.0                      |
| Blacks                 | 6.9                             | 5.8                           | 9.2                       |
| Asians                 | 4.1                             | 0.3                           | 1.1                       |
| Hispanics              | 4.1                             | 3.4                           | 4.5                       |
| MBEs                   | 16.9                            | 11.0                          | 20.5                      |
| MWBEs                  | 43.1                            | 18.4                          | 30.2                      |
| <i>1980</i>            |                                 |                               |                           |
| White female           | 19.6                            | 4.2                           | 9.2                       |
| White male             | 68.5                            | 86.5                          | 74.4                      |
| Blacks                 | 6.5                             | 5.4                           | 9.9                       |
| Asians                 | 2.5                             | 0.6                           | 0.6                       |
| Hispanics              | 2.7                             | 3.2                           | 5.4                       |
| MBEs                   | 11.9                            | 9.3                           | 16.2                      |
| MWBEs                  | 31.5                            | 13.5                          | 25.4                      |

Source: 1980, 1990 and 2000 5% PUMS, 2007 & 2008 BMCPS and Blanchflower (2005). 1990 and 2000 estimates are weight



| <b>Table 32. Self-employment probits, 1980-2000</b>                        |                |                |                |
|--|----------------|----------------|----------------|
| Chicago  | <i>2000</i>    | <i>1990</i>    | <i>1980</i>    |
| White female   | -.0336 (28.10) | -.0362 (31.58) | -.0391 (43.23) |
| Blacks   | -.0488 (33.60) | -.0494 (32.53) | -.0392 (36.08) |
| Asians   | -.0187 (8.50)  | -.0158 (6.00)  | -.0188 (8.41)  |
| Other races  | -.0142 (2.88)  | -.0351 (12.41) | -.0148 (2.08)  |
| Hispanics  | -.0402 (23.08) | -.0298 (13.78) | -.0314 (19.32) |
|  |                |                |                |
| N  | 203,608        | 191,253        | 204,506        |
| Chi <sup>2</sup>   | 7,969.07       | 8,013.7        | 8,766.3        |
| Log likelihood   | -52450.6       | -46955.1       | -40849.2       |
|  |                |                |                |
| Chicago Construction   | <i>2000</i>    | <i>1990</i>    | <i>1980</i>    |
| White female   | -.0711 (5.87)  | -.0630 (5.53)  | -.0929 (7.67)  |
| Blacks   | -.0269 (2.01)  | -.0656 (4.87)  | -.0736 (6.08)  |
| Asians   | -.0704 (2.28)  | -.1095 (3.45)  | -.0449 (1.06)  |
| Other races  | -.0097 (0.33)  | -.0993 (5.22)  | -.0784 (1.25)  |
| Hispanics  | -.0742 (6.34)  | -.0517 (2.87)  | -.0451 (2.57)  |
|  |                |                |                |
| N  | 11,537         | 10,170         | 9,257          |
| Chi <sup>2</sup>   | 531.60         | 394.1          | 358.2          |
| Log likelihood   | -5457.9        | -4390.0        | -3788.0        |
| Notes: All equations include age and its square plus 15 schooling dummies. |                |                |                |
| Excluded category white males. T-statistics in parentheses                 |                |                |                |
| Source: 1980, 1990, 2000 5% PUMS and Blanchflower (2005)                   |                |                |                |

**Table 33. Self-employment dprobits, 2000**

|                         | (1)             | (2)             | (3)            | (4)            |
|-------------------------|-----------------|-----------------|----------------|----------------|
| Construction            | .1216 (281.97)  | .1216 (281.94)  |                |                |
| Chicago                 | -.0016 (1.20)   | -.0074 (3.11)   | .0304 (3.37)   | -.0002 (0.02)  |
| White female            | -.0321 (149.71) | -.0321 (149.73) | -.0715 (38.11) | -.0714 (37.97) |
| Black                   | -.0546 (174.14) | -.0546 (172.95) | -.0913 (42.89) | -.0922 (43.03) |
| Native American         | -.0408 (50.23)  | -.0409 (50.34)  | -.0802 (17.38) | -.0804 (17.41) |
| Asian                   | -.0199 (40.19)  | -.0200 (40.08)  | -.0401 (7.73)  | -.0402 (7.72)  |
| Other race              | -.0353 (92.84)  | -.0352 (92.16)  | -.0774 (35.89) | -.0775 (35.80) |
| Hispanic                | -.0349 (84.02)  | -.0348 (83.33)  | -.0705 (29.44) | -.0709 (29.49) |
| Chicago*Black           |                 | .0109 (2.93)    |                | .1023 (4.17)   |
| Chicago*White female    |                 | .0186 (4.72)    |                | -.0892 (2.21)  |
| Chicago*Hispanic        |                 | -.0079 (1.64)   |                | .0694 (2.43)   |
| Chicago*Asian           |                 | -.0004 (0.10)   |                | .0175 (0.22)   |
| Chicago*Other race      |                 | .0104 (1.73)    |                | .0376 (1.59)   |
| Chicago*Native American |                 | .0896 (3.94)    |                | .1093 (1.05)   |
| Construction            | No              | No              | Yes            | Yes            |
| N                       | 7,848,046       | 7,848,046       | 565500         | 565500         |
| Pseudo R <sup>2</sup>   | .0813           | .0813           | .0598          | .0599          |

Source: 2000 Census.

Notes: All equations also include 15 highest qualification dummies, age and its square plus 50 state dummies. Workers only. T-statistics in parentheses. Self-employment relates to 1999.

**Table 34. Self-employment dprobits, 2007**

|                         | (1)            | (2)            | (3)            | (4)            |
|-------------------------|----------------|----------------|----------------|----------------|
| Construction            | .1771 (147.00) | .1771 (146.99) |                |                |
| Chicago                 | .0033 (0.83)   | -.0182 (3.03)  | -.0008 (0.04)  | -.0131 (0.44)  |
| White female            | -.0392 (63.68) | -.0394 (63.85) | -.1011 (20.85) | -.1012 (20.85) |
| Black                   | -.0674 (68.41) | -.0676 (68.16) | -.0549 (7.98)  | -.0559 (8.08)  |
| Native American         | -.0453 (14.43) | -.0454 (14.45) | -.0794 (4.84)  | -.0790 (4.81)  |
| Asian                   | -.0218 (16.49) | -.0218 (16.39) | -.0413 (3.36)  | -.0400 (3.24)  |
| Other race              | -.0243 (10.26) | -.0243 (10.27) | -.0103 (0.78)  | -.0086 (0.65)  |
| Hispanic                | -.0478 (50.32) | -.0477 (50.19) | -.1104 (23.85) | -.1104 (23.84) |
| Chicago*Black           |                | .0387 (3.55)   |                | .0824 (1.23)   |
| Chicago*White female    |                | .0529 (5.00)   |                | .0553 (0.46)   |
| Chicago*Hispanic        |                | .0023 (1.78)   |                | .0047 (0.67)   |
| Chicago*Asian           |                | .0028 (0.17)   |                |                |
| Chicago*Other race      |                | .0324 (0.92)   |                |                |
| Chicago*Native American |                | .0604 (0.68)   |                |                |
| Construction            | No             | No             | Yes            | Yes            |
| N                       | 1,430,351      | 1,430,351      | 107,567        | 107,551        |
| Pseudo R <sup>2</sup>   | .0919          | .0920          | .0762          | .0762          |

Source: *American Community Survey, 2007*. Notes: All equations also include 15 highest qualification dummies, age and its square plus 50 state dummies. Workers only. T-statistics in parentheses. Self-employment relates to 2006.

**Table 35. Self-employment dprobits, 2004-2008 (workers only)**

|                         | All            | All            | Construction   | Construction   | Chicago<br>Construction |
|-------------------------|----------------|----------------|----------------|----------------|-------------------------|
| White female            | -.0544 (79.51) | -.0542 (78.69) | -.0787 (14.71) | -.0789 (14.59) | -.0615 (1.75)           |
| Black                   | -.0704 (60.38) | -.0705 (59.53) | -.0787 (9.98)  | -.0776 (9.69)  | -.1136 (2.88)           |
| Native American         | -.0546 (15.06) | -.0550 (15.12) | -.0904 (4.13)  | -.0919 (4.17)  | .0950 (0.58)            |
| Asian                   | -.0382 (21.12) | -.0384 (20.84) | -.0601 (4.33)  | -.0608 (4.34)  | -.0309 (0.40)           |
| Other Races             | -.0352 (14.36) | -.0352 (14.34) | -.0291 (2.27)  | -.0290 (2.26)  | -.1360 (1.41)           |
| Hispanic                | -.0535 (41.46) | -.0529 (40.43) | -.0963 (15.88) | -.0952 (15.51) | -.1274 (3.94)           |
| Chicago                 | .0123 (2.26)   | .0183 (2.97)   | .0418 (1.53)   | .0493 (1.71)   |                         |
| Chicago*Black           |                | .0000 (0.01)   |                | -.0570 (1.15)  |                         |
| Chicago*White female    |                | -.0089 (1.58)  |                | .0084 (0.20)   |                         |
| Chicago*Hispanic        |                | -.0295 (3.73)  |                | -.0474 (1.38)  |                         |
| Chicago*Asian           |                | .0040 (0.34)   |                | .0717 (0.79)   |                         |
| Chicago*Native American |                | .1097 (2.05)   |                | .1989 (1.05)   |                         |
| N                       | 3,994,665      | 3,994,665      | 309,061        | 309,061        | 5,587                   |
| Pseudo R <sup>2</sup>   | .0725          | .0725          | .0770          | .0771          | .0798                   |

Source: Basic Monthly files of the Current Population Survey, 2004-2008

All equations include controls for age and its square, 50 state dummies, fifteen schooling dummies and four year dummies

Standard errors are clustered at the level of the household.

**Table 36. Log Earnings equations by two different types of income, 1990 & 2000**

|                           | Self-employment income |                      | Wages         |                      |
|---------------------------|------------------------|----------------------|---------------|----------------------|
|                           | Chicago                | Chicago Construction | Chicago       | Chicago Construction |
| a) 2000                   |                        |                      |               |                      |
| White female              | -.220 (3.26)           | -.806 (1.89)         | -.138 (20.21) | -.210 (4.12)         |
| Blacks                    | -.009 (0.13)           | -.741 (5.13)         | -.175 (28.99) | -.260 (9.29)         |
| Asians                    | -.142 (2.11)           | -.106 (0.29)         | -.215 (26.47) | -.224 (3.57)         |
| Other races               | -.425 (2.89)           | -.217 (0.73)         | -.245 (14.00) | -.298 (5.35)         |
| Hispanics                 | -.142 (2.11)           | -.198 (1.52)         | -.209 (33.26) | -.178 (8.49)         |
| Construction*white female | .003 (0.01)            |                      | -.077 (3.13)  |                      |
| Construction*black        | -.564 (3.28)           |                      | -.046 (1.61)  |                      |
| Construction*Hispanic     | .139 (1.00)            |                      | .085 (4.54)   |                      |
| Construction*Other race   | .378 (1.02)            |                      | -.052 (0.85)  |                      |
| N                         | 12,207                 | 1,390                | 176,866       | 9,611                |
| Adjusted R <sup>2</sup>   | .3365                  | .2346                | .6863         | .5625                |
| b) 1990                   |                        |                      |               |                      |
| White female              | -.140 (1.64)           | -.596 (0.83)         | -.185 (24.68) | -.332 (5.39)         |
| Blacks                    | -.334 (4.42)           | -.707 (3.61)         | -.198 (30.86) | -.258 (8.70)         |
| Asians                    | -.078 (0.94)           | -.148 (0.29)         | -.266 (27.20) | -.203 (2.87)         |
| Other races               | -.172 (1.34)           | .050 (0.15)          | -.215 (22.53) | -.139 (3.98)         |
| Hispanics                 | .045 (0.53)            | .185 (0.82)          | -.183 (22.19) | -.116 (3.17)         |
| Construction*white female | .144 (0.64)            |                      | -.107 (4.45)  |                      |
| Construction*black        | -.342 (1.45)           |                      | -.015 (0.50)  |                      |
| Construction*Hispanic     | .180 (0.63)            |                      | .099 (2.65)   |                      |
| Construction*Other race   | .342 (0.88)            |                      | .146 (4.27)   |                      |
| N                         | 12,767                 | 1,251                | 165,607       | 8,565                |
| Adjusted R <sup>2</sup>   | .3198                  | .2933                | .7223         | .6232                |

Source: Blanchflower (2005) and 1990 and 2000 5% PUMS Census files

Notes: Equations include 15 schooling dummies, 5 sector of work dummies, age and its square, gender, log hours and log weeks, construction industry dummy and a self employed dummy. Positive self-employment income modeled.

**Table 37. Log Self Employment Earnings Equations, 1979–2007**

|                         | (1)              | (2)              | (3)              | (4)              | (5)              | (6)              |
|-------------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                         | All              | All              | Construction     | Construction     | Construction     | Construction     |
|                         | 1978-1990        | 1991-2001        | 1978-1990        | 1991-2001        | 1999             | 2006             |
| White female            | -.729<br>(68.07) | -.617<br>(31.34) | -.835<br>(21.63) | -.839<br>(15.73) | -.702<br>(28.67) | -.514<br>(18.20) |
| Black                   | -.500<br>(15.64) | -.591<br>(14.85) | -.428<br>(5.73)  | -.323<br>(2.40)  | -.387<br>(12.09) | -.544<br>(14.09) |
| Hispanic                | -.278<br>(9.46)  | -.390<br>(9.8)   | -.252<br>(3.96)  | -.145<br>(1.38)  | -.146<br>(4.96)  | -.279<br>(10.24) |
| Other races             | -.328<br>(8.29)  | -.221<br>(3.41)  | -.208<br>(1.79)  | -.180<br>(0.84)  | -.160<br>(5.08)  | -.374<br>(5.43)  |
| Asian/Pacific Islanders |                  |                  |                  |                  | .004<br>(0.08)   | -.232<br>(3.64)  |
| Native Americans        |                  |                  |                  |                  | -.397<br>(7.15)  | -.295<br>(3.13)  |
| Education controls (16) | No               | Yes              | No               | Yes              | Yes              | Yes              |
| Year dummies (13)       | Yes              | Yes              | Yes              | Yes              | No               | No               |
| State dummies (51)      | Yes              | Yes              | Yes              | Yes              | Yes              | Yes              |
| Industry dummies (88)   | Yes              | Yes              | No               | No               | No               | No               |
| N                       | 82,094           | 55,639           | 12,577           | 8,446            | 64,188           | 30502            |
| Adjusted R <sup>2</sup> | .177             | .128             | .077             | .064             | .064             | .096             |

Notes: The percents indicate the percent difference in self-employment earnings between the indicated group and whites. Controls also include age, age squared and a full set of year dummies in columns 1-4 plus years of education in columns 1 and 3. CPS data relate to the year preceding the survey, so the 1991 data are taken from the 1992 survey etc. T-statistics in parentheses.

Source: Annual Demographic (March) files of the Current Population Survey for 1979-2005, 2000 Census and 2007 American Community Survey.

**Table 38. Wage and union membership equations, 2006-2008 (workers only)**

|                           | Log hourly pay (OLS) |                | Union membership probability (dprobit) |               |
|---------------------------|----------------------|----------------|--|---------------|
|                           | All                  | Construction   | All                                    | Construction  |
| Union                     | .1349 (57.55)        | .2510 (36.27)  |  |               |
| Male                      | .1916 (128.79)       | .1740 (21.29)  | .0387 (45.53)                          | .1174 (20.97) |
| Black                     | -.1083 (42.48)       | -.2159 (18.27) | .0196 (13.46)                          | .0054 (0.63)  |
| Native American           | -.1062 (14.21)       | -.1277 (5.87)  | -.0356 (9.57)                          | .0180 (1.10)  |
| Asian                     | -.0273 (7.76)        | -.0525 (2.98)  | .0285 (13.50)                          | .0807 (5.81)  |
| Other Races               | -.0337 (5.96)        | -.0222 (1.22)  | .0337 (9.83)                           | .0836 (5.72)  |
| Hispanic                  | -.0737 (28.90)       | -.1321 (18.60) | -.0001 (0.07)                          | -.0488 (9.07) |
| Chicago                   | .0703 (10.85)        | .0915 (3.93)   | .0315 (8.10)                           | .2630 (12.66) |
| Chicago*Black             | -.0613 (4.11)        | -.1661 (2.24)  | .0517 (5.99)                           | -.0208 (0.48) |
| Chicago*Asian             | -.0466 (2.12)        | .1663 (0.83)   | -.0574 (5.57)                          | -.1001 (1.19) |
| Chicago*Hispanic          | -.0496 (3.57)        | -.0954 (2.24)  | .0322 (3.88)                           | .0117 (0.42)  |
| Chicago*Other race        | .0255 (0.37)         | .2727 (1.06)   | -.0691 (2.38)                          |               |
| Chicago*Native American   | .0232 (0.27)         | .4801 (1.52)   | .1185 (1.96)                           |               |
| Construction              | .1557 (51.56)        | .0618 (33.52)  | .0618 (33.52)                          |               |
| Constant                  | .6959                | 1.2375         |  |               |
| N                         | 515693               | 33603          | 530581                                 | 34439         |
| Adj/Pseudo R <sup>2</sup> | .3365                | .2607          | .1442                                  | .0890         |

Source: Merged Outgoing Rotation Group files of the Current Population Survey, 2006-2008

All equations include controls for age and its square, fifteen schooling dummies, four class of worker dummies and two year dummies  
Standard errors are clustered at the level of the household.

Table 39  
New Firm Financing by Primary Owner Gender  
Kauffman Firm Survey

|                                  | Baseline<br>2004 |           | First Follow Up<br>2005 |           | Second Follow Up<br>2006 |           |
|----------------------------------|------------------|-----------|-------------------------|-----------|--------------------------|-----------|
|                                  | Female           | Male      | Female                  | Male      | Female                   | Male      |
| Total Financial Capital Invested | \$ 54,375        | \$ 80,285 | \$ 34,122               | \$ 63,526 | \$ 31,455                | \$ 59,584 |
| Total Debt                       | \$ 30,510        | \$ 41,488 | \$ 22,216               | \$ 39,151 | \$ 22,174                | \$ 41,379 |
| Owner Debt                       | \$ 21,198        | \$ 19,603 | \$ 14,696               | \$ 19,308 | \$ 13,197                | \$ 18,638 |
| Business Debt                    | \$ 9,312         | \$ 21,885 | \$ 7,520                | \$ 19,842 | \$ 8,977                 | \$ 22,741 |
| Equity Investment                | \$ 23,865        | \$ 38,797 | \$ 11,787               | \$ 24,701 | \$ 9,182                 | \$ 17,800 |
| Internal Equity                  | \$ 21,704        | \$ 29,920 | \$ 8,641                | \$ 15,446 | \$ 7,451                 | \$ 12,180 |
| External Equity                  | \$ 3,196         | \$ 11,224 | \$ 3,265                | \$ 8,930  | \$ 1,830                 | \$ 6,024  |
| Leverage Ratios                  |                  |           |                         |           |                          |           |
| Debt/Equity                      | 127.8%           | 106.9%    | 188.5%                  | 158.5%    | 241.5%                   | 232.5%    |
| Debt/Total FK                    | 56.1%            | 51.7%     | 65.1%                   | 61.6%     | 70.5%                    | 69.4%     |
| Internal Equity/Total FK         | 39.9%            | 37.3%     | 25.3%                   | 24.3%     | 23.7%                    | 20.4%     |
| External Eq/Total FK             | 5.9%             | 14.0%     | 9.6%                    | 14.1%     | 5.8%                     | 10.1%     |

Source: Tabulations of the Kauffman Firm Survey and Coleman and Robb (2009)



**Table 40. Most important problem experienced by firm (weighted)**

|   | White<br>Males | White<br>Females | Blacks | Asians | Hispanics | Other<br>Races | All |
|---|----------------|------------------|--------|--------|-----------|----------------|-----|
| Financing and interest rates                    | 5              | 6                | 20     | 10     | 6         | 7              | 6   |
| Poor sales or profitability                     | 18             | 22               | 38     | 31     | 29        | 24             | 21  |
| Taxes   | 6              | 4                | 2      | 3      | 8         | 10             | 6   |
| Inflation                                       | 3              | 1                | 1      | 3      | 1         | 1              | 2   |
| Cost of labor                                   | 2              | 2                | 0      | 0      | 2         | 1              | 1   |
| Government regulations/red tape                 | 5              | 3                | 1      | 4      | 11        | 16             | 5   |
| Competition from larger firms                   | 4              | 4                | 3      | 3      | 3         | 4              | 4   |
| Quality of labor                                | 8              | 6                | 7      | 6      | 4         | 2              | 7   |
| Cost and availability of insurance (not health) | 10             | 6                | 2      | 3      | 6         | 3              | 9   |
| Cash flow                                       | 6              | 7                | 5      | 5      | 8         | 4              | 6   |
| Growth  | 1              | 1                | 3      | 0      | 1         | 1              | 1   |
| Foreign competition                             | 1              | 1                | 0      | 1      | 0         | 0              | 1   |
| Competition                                     | 2              | 1                | 1      | 2      | 0         | 0              | 1   |
| Availability of materials/resources             | 1              | 1                | 1      | 1      | 2         | 0              | 1   |
| Labor problems other than cost or quality       | 1              | 1                | 2      | 0      | 0         | 0              | 1   |
| Internal management/administrative problems     | 4              | 6                | 2      | 4      | 1         | 3              | 4   |
| Environmental constraints (weather/specific)    | 2              | 2                | 1      | 1      | 3         | 2              | 2   |
| Advertising and public awareness                | 2              | 3                | 3      | 2      | 1         | 3              | 2   |
| Market/economic/industry factors                | 5              | 6                | 2      | 4      | 3         | 3              | 5   |
| Health care cost and availability               | 1              | 1                | 0      | 1      | 1         | 4              | 1   |
| Energy costs                                    | 2              | 1                | 0      | 1      | 4         | 0              | 1   |
| Costs other than health care and energy         | 2              | 1                | 1      | 0      | 4         | 0              | 2   |
| Other   | 3              | 2                | 3      | 2      | 1         | 8              | 2   |
| None  | 5              | 9                | 3      | 11     | 4         | 3              | 6   |

Source: 2003 Survey of Small Business Finances.

**Table 41. Probabilities of denial, (Dprobit), 2003**

|                           | (1)          | (2)           | (3)           | (4)           | (5)           | (6)           |
|---------------------------|--------------|---------------|---------------|---------------|---------------|---------------|
| Blacks                    | .4882 (8.07) | .4540 (7.43)  | .3675 (6.08)  | .3142 (5.44)  | .2964 (5.25)  | .2861 (5.01)  |
| Asians                    | .0911 (2.11) | .0766 (1.88)  | .0694 (1.76)  | .0663 (1.76)  | .0666 (1.87)  | .0659 (1.85)  |
| Hispanics                 | .1305 (2.79) | .1143 (2.59)  | .0866 (2.11)  | .0812 (2.08)  | .0893 (2.34)  | .0953 (2.26)  |
| Other races               | .1610 (2.16) | .1254 (1.78)  | .1330 (1.91)  | .1312 (1.89)  | .1037 (1.65)  | .1045 (1.66)  |
| White women               | .0575 (2.41) | .0454 (2.05)  | .0389 (1.83)  | .0306 (1.51)  | .0184 (1.01)  | .0162 (0.86)  |
| Employment size           |              | -.0006 (4.31) | -.0005 (3.79) | -.0005 (3.77) | -.0005 (4.14) | -.0005 (4.15) |
| Firm bankrupt             |              |               | .1996 (1.98)  | .1244 (1.45)  | .1024 (1.36)  | .1006 (1.34)  |
| Firm delinquent           |              |               | .0629 (3.62)  | .0215 (1.32)  | .0136 (0.93)  | .0135 (0.92)  |
| Owner delinquent          |              |               | .1473 (5.16)  | .1368 (5.00)  | .1379 (5.24)  | .1383 (5.23)  |
| Owner bankrupt            |              |               | .0993 (1.38)  | .0851 (1.27)  | .0644 (1.11)  | .0664 (1.13)  |
| Owner judgments           |              |               | .0663 (1.48)  | .0594 (1.40)  | .0484 (1.40)  | .0483 (1.30)  |
| Construction*Black        |              |               |               |               |               | .1081 (0.53)  |
| Construction*Hispanic     |              |               |               |               |               | -.0172 (0.27) |
| Construction*white female |              |               |               |               |               | .0327 (0.45)  |
| D & B credit score        | No           | No            | No            | 5             | 5             | 5             |
| Organization type         | No           | 9             | 9             | 9             | 9             | 9             |
| Regional dummies          | No           | 9             | 9             | 9             | 9             | 9             |
| Industry dummies          | No           | No            | No            | No            | 38            | 38            |
| Pseudo R <sup>2</sup>     | .0610        | .1048         | .1662         | .1931         | .2496         | .2500         |
| N                         | 1854         | 1838          | 1838          | 1838          | 1838          | 1838          |

Source: 2003 Survey of Small Business Finances. Excluded category white men. T-statistics in parentheses. Dependent variable is whether a loan was application was denied. First imputation method used. Denial rates below.

|               | Rate (%) | N    |
|---------------|----------|------|
| White males   | 11.8     | 1460 |
| White females | 14.8     | 209  |
| Blacks        | 68.3     | 47   |
| Asians        | 18.0     | 61   |
| Hispanics     | 15.4     | 55   |
| Other races   | 37.5     | 22   |
| Total         | 14.8     | 1854 |

**Table 42. Use of business credit cards (dprobit)**

|                           | (1)          | (2)          | (3)          | (4)          | (5)          | (6)          |
|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Blacks                    | -.149 (3.16) | -.131 (2.75) | -.086 (1.77) | -.039 (0.78) | -.027 (0.53) | -.008 (0.14) |
| Asians                    | .028 (0.71)  | .032 (0.81)  | .020 (0.49)  | .036 (0.88)  | .041 (1.00)  | .044 (1.06)  |
| Hispanics                 | -.010 (0.24) | -.001 (0.03) | .023 (0.49)  | .034 (0.76)  | .036 (0.80)  | .060 (1.24)  |
| Other races               | -.024 (0.41) | -.009 (0.14) | .021 (0.34)  | .034 (0.76)  | .019 (0.31)  | .021 (0.33)  |
| White women               | -.071 (3.31) | -.050 (2.34) | -.008 (0.36) | .002 (0.09)  | .010 (0.44)  | .020 (0.83)  |
| Employment size           |              | .001 (8.93)  | .001 (3.75)  | .001 (3.50)  | .001 (4.28)  | .001 (4.23)  |
| Firm bankrupt             |              |              |              | -.008 (0.09) | .007 (0.07)  | .016 (0.16)  |
| Firm delinquent           |              |              |              | .072 (2.94)  | .066 (2.66)  | .069 (2.77)  |
| Owner delinquent          |              |              |              | -.088 (2.82) | -.090 (2.83) | -.094 (2.97) |
| Owner bankrupt            |              |              |              | -.042 (0.63) | -.045 (0.66) | -.048 (0.71) |
| Owner judgments           |              |              |              | -.014 (0.22) | -.005 (0.09) | -.006 (0.10) |
| Construction*Black        |              |              |              |              |              | -.282 (1.31) |
| Construction*Hispanic     |              |              |              |              |              | -.187 (1.38) |
| Construction*white female |              |              |              |              |              | -.128 (1.37) |
| D & B credit score        | No           | No           | No           | 5            | 5            | 5            |
| Organization type         | No           | No           | 9            | 9            | 9            | 9            |
| Regional dummies          | No           | No           | 9            | 9            | 9            | 9            |
| Industry dummies          | No           | No           | No           | No           | 38           | 38           |
| Pseudo R <sup>2</sup>     | .0036        | .0183        | .0703        | .0774        | .0884        | .0893        |
| N                         | 4181         | 4181         | 4181         | 4181         | 4181         | 4181         |

Source: 2003 Survey of Small Business Finances. Excluded category white men. T-statistics in parentheses. Dependent variable is the interest charged on the loan. First imputation method used.

**Table 43. Interest rates charged (OLS)**

|                           | (1)           | (2)            | (3)            | (4)            | (5)            |
|---------------------------|---------------|----------------|----------------|----------------|----------------|
| Blacks                    | 1.6088 (3.01) | 1.0925 (2.14)  | 1.2286 (2.45)  | 1.0532 (2.11)  | 1.2256 (2.39)  |
| Asians                    | .4652 (1.30)  | .5106 (1.50)   | .5234 (1.57)   | .5391 (1.62)   | .4514 (1.35)   |
| Hispanics                 | 1.6945 (4.45) | 1.6462 (4.54)  | 1.5885 (4.46)  | 1.5272 (4.30)  | 1.5013 (3.81)  |
| Other races               | .4042 (2.00)  | .2294 (1.19)   | .1318 (0.70)   | .0916 (0.49)   | -.1281 (0.22)  |
| White women               | .0469 (0.08)  | .0210 (0.04)   | -.0725 (0.13)  | .0065 (0.01)   | .1591 (0.81)   |
| Fixed interest rate       |               | 1.6047 (13.23) | 1.4125 (11.63) | 1.3474 (11.01) | 1.3651 (11.12) |
| Employment size           |               |                | -.0066 (8.04)  | -.0060 (7.13)  | -.0061 (7.08)  |
| Construction*Black        |               |                |                |                | -3.7000 (1.50) |
| Construction*Hispanic     |               |                |                |                | -.0084 (0.01)  |
| Construction*white female |               |                |                |                | -.7233 (1.14)  |
| Organization type         | No            | No             | No             | Yes            | Yes            |
| D & B credit score        | No            | No             | No             | Yes            | Yes            |
| Regional dummies          | No            | No             | No             | No             | Yes            |
| Constant                  | 5.7552        | 5.0680         | 5.5118         | 6.2984         | 6.3818         |
| Adjusted R <sup>2</sup>   | .0155         | .1073          | .1397          | .1521          | .1552          |
| N                         | 1699          | 1699           | 1699           | 1699           | 1699           |

Source: 2003 Survey of Small Business Finances. Notes: 8 organization type dummies and 5 Dun and Bradstreet credit core dummies are included in the final column. Excluded category white men. T-statistics in parentheses. Dependent variable is the interest charged on the loan. First imputation method used.

|               | Rate (%) | N    |
|---------------|----------|------|
| White males   | 6.4      | 1366 |
| White females | 7.0      | 188  |
| Blacks        | 10.1     | 24   |
| Asians        | 6.6      | 55   |
| Hispanics     | 8.9      | 48   |
| Other races   | 7.1      | 18   |
| Total         | 6.6      | 1699 |

**Table 44. Probabilities of denial, (Dpro bit), 2008**

|                       | (1)           | (2)           | (3)          | (4)           |
|-----------------------|---------------|---------------|--------------|---------------|
| Blacks                | .3550 (3.42)  | .4237 (3.86)  | .4582 (8.86) | .4907 (8.07)  |
| Asians                | .0520 (0.33)  | .0945 (1.00)  | .0892 (2.12) | .0939 (2.11)  |
| Hispanics             | .0186 (0.22)  | .0252 (0.62)  | .1056 (2.64) | .1328 (2.79)  |
| Natives               | .2290 (0.98)  | .3435 (1.60)  | .1715 (2.40) | .1643 (2.16)  |
| White women           | -.0228 (0.34) | -.0011 (0.05) | .0482 (2.16) | .0588 (2.41)  |
| Chicago               |               |               | .0084 (0.38) | .0436 (1.38)  |
| Chicago*Blacks        |               |               |              | -.0571 (1.11) |
| Chicago*Asians        |               |               |              | -.0325 (0.32) |
| Chicago*Hispanics     |               |               |              | -.0624 (1.14) |
| Chicago*Natives       |               |               |              | .0188 (0.12)  |
| Chicago*White women   |               |               |              | -.0548 (1.18) |
| Employment size       |               | -.0019 (1.96) |              |               |
| Owner delinquent      |               | .0837 (2.84)  |              |               |
| Schooling dummies     |               | 5             |              |               |
| Industry dummies      |               | 7             |              |               |
| Pseudo R <sup>2</sup> | .0758         | .2720         | .0632        | .0653         |
| N                     | 207           | 179           | 2061         | 2061          |

Source: City of Chicago Credit Survey, 2008 plus SSBF 2003 in columns 3 and 4

**Table 45. Small Business Indicators**

|   | 2004  | 2005  | 2006 | 2007  | 2008  | Q407 | Q108  | Q208  | Q308  | Q408  |
|---|-------|-------|------|-------|-------|------|-------|-------|-------|-------|
| a) Bankruptcy and lending                     |       |       |      |       |       |      |       |       |       |       |
| Business bankruptcy filings (thousands)       | 34.3  | 39.2  | 19.7 | 28.3  | --    | 8.0  | 8.7   | 9.7   | 11.5  | --    |
| Net small firm lending standards <sup>a</sup> | 13.1  | 9.0   | 4.6  | -4.3  | -55.5 | -9.6 | -30.4 | -51.8 | -65.3 | -74.6 |
| Net small firm demand for loans <sup>b</sup>  | 25.9  | 27.3  | 0.2  | -11.0 | -15.6 | -7.7 | -23.6 | -16.1 | -15.4 | -7.4  |
|   | 2004  | 2005  | 2006 | 2007  | 2008  | Aug  | Sept  | Oct   | Nov   | Dec   |
| b) NFIB Optimism                              |       |       |      |       |       |      |       |       |       |       |
| NFIB Small Business Optimism Index            | 104.6 | 101.6 | 98.9 | 96.7  | 89.8  | 91.1 | 92.9  | 87.5  | 87.8  | 85.2  |
| NFIB: next 3 mths "good time to expand" (%)   | 22.3  | 20.6  | 17.4 | 13.9  | 6.5   | 6.0  | 11.0  | 5.0   | 7.0   | 7.0   |
| NFIB: net % planning to hire next 3 mths      | 15.3  | 14.4  | 14.6 | 12.9  | 3.8   | 9.0  | 7.0   | 0-    | 4.0   | -6.0  |
|   | 2004  | 2005  | 2006 | 2007  | 2008  | Aug  | Sept  | Oct   | Nov   | Dec   |
| c) Self-employment                            |       |       |      |       |       |      |       |       |       |       |
| Self-employed, incorporated (millions)        | 5.2   | 5.3   | 5.5  | 5.8   | 5.8   | 5.9  | 5.8   | 5.9   | 5.9   | 5.8   |
| Self-employed, unincorporated (millions)      | 10.4  | 10.5  | 10.6 | 10.4  | 10.1  | 10.3 | 10.1  | 9.7   | 9.6   | 9.6   |

Notes: Net small firm lending standards from Senior loan officers, % respondents

<sup>a</sup> Commercial and industrial loans % whose standards were eased minus % whose standards tightened

<sup>b</sup> Commercial and industrial loans % whose demand was stronger minus % whose demand was weaker

Source: Small Business Administration Quarterly Indicator, Fourth Quarter 2008, Office of Advocacy.

**Table 46. Senior Loan Officers' reports on loan standards and costs of credit lines, 2009**

A. Standards for large and middle-market firms (annual sales of \$50 million or more):

|                              | All Respondents |              | Large Banks |              | Other Banks |              |
|------------------------------|-----------------|--------------|-------------|--------------|-------------|--------------|
|                              | Banks           | Percent      | Banks       | Percent      | Banks       | Percent      |
| Tightened considerably       | 5               | 9.4          | 4           | 13.8         | 1           | 4.2          |
| Tightened somewhat           | 29              | 54.7         | 15          | 51.7         | 14          | 58.3         |
| Remained basically unchanged | 19              | 35.8         | 10          | 34.5         | 9           | 37.5         |
| Eased somewhat               | 0               | 0.0          | 0           | 0.0          | 0           | 0.0          |
| Eased considerably           | 0               | 0.0          | 0           | 0.0          | 0           | 0.0          |
| <b>Total</b>                 | <b>53</b>       | <b>100.0</b> | <b>29</b>   | <b>100.0</b> | <b>24</b>   | <b>100.0</b> |

B. Standards for small firms (annual sales of less than \$50 million):

|                              | All Respondents |              | Large Banks |              | Other Banks |              |
|------------------------------|-----------------|--------------|-------------|--------------|-------------|--------------|
|                              | Banks           | Percent      | Banks       | Percent      | Banks       | Percent      |
| Tightened considerably       | 4               | 7.7          | 3           | 10.7         | 1           | 4.2          |
| Tightened somewhat           | 32              | 61.5         | 16          | 57.1         | 16          | 66.7         |
| Remained basically unchanged | 16              | 30.8         | 9           | 32.1         | 7           | 29.2         |
| Eased somewhat               | 0               | 0.0          | 0           | 0.0          | 0           | 0.0          |
| Eased considerably           | 0               | 0.0          | 0           | 0.0          | 0           | 0.0          |
| <b>Total</b>                 | <b>52</b>       | <b>100.0</b> | <b>28</b>   | <b>100.0</b> | <b>24</b>   | <b>100.0</b> |

c. Costs of credit lines for smaller firms

|                              | All Respondents |         | Large Banks |         | Other Banks |         |
|------------------------------|-----------------|---------|-------------|---------|-------------|---------|
|                              | Banks           | Percent | Banks       | Percent | Banks       | Percent |
| Tightened considerably       | 9               | 17.3    | 4           | 14.3    | 5           | 20.8    |
| Tightened somewhat           | 32              | 61.5    | 19          | 67.9    | 13          | 54.2    |
| Remained basically unchanged | 11              | 21.2    | 5           | 17.9    | 6           | 25.0    |
| Eased somewhat               | 0               | 0.0     | 0           | 0.0     | 0           | 0.0     |
| Eased considerably           | 0               | 0.0     | 0           | 0.0     | 0           | 0.0     |
| <b>Total</b>                 | 52              | 100.0   | 28          | 100.0   | 24          | 100.0   |

d. Spreads of loan rates over your bank's cost of funds (wider spreads=tightened, narrower spreads=eased) for smaller firms

|                              | All Respondents |         | Large Banks |         | Other Banks |         |
|------------------------------|-----------------|---------|-------------|---------|-------------|---------|
|                              | Banks           | Percent | Banks       | Percent | Banks       | Percent |
| Tightened considerably       | 10              | 19.2    | 4           | 14.3    | 6           | 25.0    |
| Tightened somewhat           | 36              | 69.2    | 21          | 75.0    | 15          | 62.5    |
| Remained basically unchanged | 6               | 11.5    | 3           | 10.7    | 3           | 12.5    |
| Eased somewhat               | 0               | 0.0     | 0           | 0.0     | 0           | 0.0     |
| Eased considerably           | 0               | 0.0     | 0           | 0.0     | 0           | 0.0     |
| <b>Total</b>                 | 52              | 100.0   | 28          | 100.0   | 24          | 100.0   |

Source: Senior Loan Officer Survey, January 2009

<http://www.federalreserve.gov/boarddocs/snloansurvey/200902/table1.htm>



**Table 47. Duke University Survey of CFOs, January 2009.**

**Q6a. Has your company been affected by the cost or availability of credit?**

|                  | Number | Percent |
|------------------|--------|---------|
| 1=No             | 283    | 42.1 %  |
| 2=Yes, somewhat  | 240    | 35.7 %  |
| 3=Yes, very much | 150    | 22.3 %  |
| Total            | 673    | 100.0 % |

Response Percent = 99.1 %

**Q6b. If yes, in what ways has your company been affected by the credit market turmoil? (check all that apply)**

|  | Number | Percent |
|--|--------|---------|
| Decreased availability of credit                                 | 241    | 61.8 %  |
| Increased cost of credit   | 194    | 49.7 %  |
| Experienced difficulty initiating or renewing a bank credit line | 122    | 31.3 %  |
| Other  | 87     | 22.3 %  |
| Total  | 644    |         |

**Q6b. In what ways has your company been affected by the credit market turmoil? - by - Credit Rating (US based companies)**

| N=261  | Total         | Credit Rating |             |             |                |
|--|---------------|---------------|-------------|-------------|----------------|
|  |               | AAA/AA<br>A   | A<br>B      | BBB/BB<br>C | B or Less<br>D |
| Total  | 261<br>100.0% | 72<br>27.6%   | 49<br>18.8% | 91<br>34.9% | 49<br>18.8%    |
| Decreased Availability of credit                                 | 157<br>60.2%  | 40<br>55.6%   | 23<br>46.9% | 54<br>59.3% | 40<br>81.6%    |
| Increased cost of Credit   | 131<br>50.2%  | 31<br>43.1%   | 25<br>51.0% | 43<br>47.3% | 32<br>65.3%    |
| Other  | 62<br>23.8%   | 19<br>26.4%   | 17<br>34.7% | 21<br>23.1% | 5<br>10.2%     |
| Experienced difficulty initiating or renewing a bank credit line | 70<br>26.8%   | 12<br>16.7%   | 10<br>20.4% | 22<br>24.2% | 26<br>53.1%    |

**Table 48. Access to credit questions from national Small Business Poll, 2008**

| <i>Employee Size of Firm</i>  | <b>1-9</b> | <b>10-19</b> | <b>20-249</b> | <b>All Firms</b> |
|---|------------|--------------|---------------|------------------|
| <b>1. Have the nation's financial problems, which became highly visible in September, affected your business:?</b>  |            |              |               |                  |
| 1. Significantly  | 35.8%      | 27.9%        | 22.1%         | 33.6%            |
| 2. Considerably   | 19.2       | 18.6         | 19.5          | 19.2             |
| 3. Somewhat   | 20.5       | 24.4         | 29.9          | 21.8             |
| 4. Modestly   | 11.0       | 15.1         | 16.9          | 12.0             |
| 5. Not at all   | 12.7       | 14.0         | 11.7          | 12.8             |
| 6.(DK/Ref)  | 0.8        | —            | —             | 0.6              |
| Total   | 100.0%     | 100.0%       | 100.0%        | 100.0%           |
| N   | 350        | 201          | 200           | 751              |
| <b>2. For your business, is the most important immediate problem associated with the current financial situation caused by:? (If any effect in Q#1.)</b>  |            |              |               |                  |
| 1. An inability to obtain credit  | 9.9%       | 6.8%         | 2.9%          | 8.9%             |
| 2. Slowing or lost sales  | 44.2       | 44.6         | 51.5          | 45.0             |
| 3. Falling real estate values   | 10.5       | 4.1          | 2.9           | 9.0              |
| 4. The cost and/or terms of credit  | 4.8        | 5.4          | 4.4           | 4.6              |
| 5. Unpredictability of business conditions  | 21.7       | 28.4         | 29.4          | 23.1             |
| 6. (Other)  | 4.4        | 4.1          | 1.5           | 4.1              |
| 7. (None)   | 3.5        | 5.4          | 5.9           | 3.9              |
| 8. (DK/Ref)   | 1.1        | 1.4          | 1.5           | 1.1              |
| Total   | 100.0%     | 100.0%       | 100.0%        | 100.0%           |
| N   | 304        | 174          | 177           | 655              |
| <b>3. For your business, does the immediate financial problem associated with the current financial situation:?</b>   |            |              |               |                  |
| 1. Threaten its survival  | 26.8%      | 21.3%        | 20.3%         | 25.6%            |
| 2. Depress its prospects for the foreseeable future   | 16.5       | 16.0         | 15.9          | 16.4             |
| 3. Temporarily set it back  | 27.8       | 26.7         | 24.6          | 27.3             |
| 4. Require minor adjustments  | 23.3       | 26.7         | 30.4          | 24.4             |
| 5. (None)   | 0.4        | 1.3          | 1.4           | 0.6              |
| 6. (DK/Ref)   | 5.1        | 8.0          | 7.2           | 5.7              |
| Total   | 100.0%     | 100.0%       | 100.0%        | 100.0%           |
| N   | 304        | 174          | 177           | 655              |
| <b>Since mid-September, has your business been able to get all of the credit you wanted, most of the credit, some of the credit, or none of the credit you wanted? (If applied for any credit)</b>  |            |              |               |                  |
| 1. All of the credit wanted   | 36.9%      | 46.4%        | 65.6%         | 41.9%            |
| 2. Most of the credit wanted  | 7.4        | 10.7         | 6.3           | 7.6              |
| 3. Some of the credit wanted  | 13.6       | 17.9         | 12.5          | 14.0             |
| 4. None of the credit wanted  | 39.2       | 17.9         | 15.6          | 33.5             |
| 5. (DK/Ref)   | 2.8        | 7.1          | —             | 2.9              |
| Total   | 100.0%     | 100.0%       | 100.0%        | 100.0%           |
| N   | 96         | 62           | 85            | 243              |
| <b>8. You indicated that you did not try to get any of these types of credit since mid-September. Was that because you did NOT want any credit or was it because you thought you couldn't get the credit even if you tried? (If did NOT apply for any credit)</b> |            |              |               |                  |
| 1. Didn't want credit   | 86.3%      | 84.7%        | 93.2%         | 86.7%            |
| 2. Didn't think you could get credit  | 11.9       | 13.6         | 6.8           | 11.7             |
| 3. (DK/Ref)   | 1.8        | 1.7          | —             | 1.6              |
| Total   | 100.0%     | 100.0%       | 100.0%        | 100.0%           |
| N   | 254        | 139          | 115           | 508              |

**Table 49. Characteristics of owners and businesses in the neighborhood survey**

|  | All  | Hispanic | Black   | White   | Asian  | Other  |
|--|------|----------|---------|---------|--------|--------|
| Share in manufacturing, wholesale, construction transportation | 5.6  | 6.9      | 2.3*    | 21.6*   | 2.5    | 4.9    |
| Share in retail  | 66.7 | 70.2     | 51.1**  | 49.3*   | 95.0** | 95.1** |
| Share in eating/drinking places                                | 18.4 | 24.2     | 13.0**  | 20.2    | 5.6**  | 22.8   |
| Share in food stores   | 11.4 | 14.0     | 8.4     | 4.7     | 2.8    | 25.5   |
| Share in auto service/sales                                    | 8.5  | 10.9     | 7.6     | 0.0     | 2.5    | 11.0   |
| Share in other retail  | 28.5 | 21.1     | 22.1    | 24.4    | 84.1** | 35.7   |
| Share in business, personal service                            | 27.7 | 22.9     | 46.6**  | 29.1    | 2.5**  | 0.0**  |
| Age of business in years                                       | 8.5  | 6.9      | 11.6**  | 14.9**  | 3.7**  | 5.9    |
| Number of employees  | 4.5  | 3.9      | 5.3     | 11.1*   | 2.3    | 3.1    |
| Percent of businesses in danger of failing                     | 27.2 | 29.8     | 28.2    | 4.7**   | 22.7   | 26.5   |
| Percent of businesses facing growth challenges                 | 10.5 | 7.4      | 15.3**  | 13.8    | 6.6    | 10.9   |
| Percent giving consumer credit                                 | 20.0 | 22.5     | 17.6*   | 36.6    | 9.3    | 17.8   |
| Share female   | 31.2 | 31.1     | 40.5**  | 16.1    | 18.1   | 15.2*  |
| Share with no high school degree                               | 29.6 | 49.4     | 16.0**  | 9.8**   | 3.6**  | 14.5** |
| Share with high school degree or some college                  | 43.4 | 41.6     | 46.6    | 28.0    | 49.0   | 43.3   |
| Share with college degree                                      | 27.0 | 9.0      | 37.4**  | 62.1**  | 47.4** | 42.2** |
| Share proficient in English                                    | 84.9 | 70.5     | 100.0** | 100.0** | 88.8** | 90.1** |
| Percent that previously owned another business                 | 32.3 | 32.9     | 26.0    | 37.9    | 59.0** | 21.8   |
| Percent with someone to talk to about business                 | 40.3 | 43.2     | 35.9    | 47.6    | 38.2   | 39.9   |
| Number of businesses   | 361  | 171      | 116     | 21      | 31     | 22     |
| Supplier offers credit   | 49.7 | 44.4     | 42.4    | 60.8**  | 77.6** | 67.0** |
| Supplier of same ethnicity                                     | 35.1 | 32.9     | 30.8    | 59.9**  | 56.1** | 17.8** |
| Years with supplier  | 6.5  | 5.6      | 7.6**   | 12.6**  | 4.3*   | 5.7    |
| Supplier in neighborhood                                       | 27.1 | 38.5     | 19.9**  | 20.4**  | 5.3**  | 21.1** |
| Number of suppliers  | 838  | 403      | 246     | 55      | 79     | 55     |

*Notes.* Data are from the Federal Reserve Bank of Chicago-University of Chicago surveys of Little Village and Chatham. \* Difference from Hispanic firms is statistically significant at the 10% level. \*\* Idem., at the 5% level. Source: Aaronson et al (2005)

**Table 50. Use of trade credit and denial of trade credit (dprobits)**

|                       | (1)           | (2)           | (3)           | (4)           |
|-----------------------|---------------|---------------|---------------|---------------|
|                       | Use           | Use           | Denial        | Denial        |
| White women           | -.1595 (7.85) | -.0609 (2.84) | -.0122 (1.34) | -.0101 (1.69) |
| Blacks                | -.2937 (6.39) | -.1588 (3.29) | .0411 (1.92)  | .0012 (0.11)  |
| Asians                | -.0993 (2.66) | -.0658 (1.72) | -.0214 (1.30) | -.0037 (0.33) |
| Hispanics             | -.1126 (2.68) | -.0683 (1.58) | .0149 (0.78)  | .0022 (0.19)  |
| Other races           | -.1269 (2.26) | -.0710 (1.25) | -.0102 (0.41) | -.0043 (0.28) |
| Employment size       |               | .0012 (4.79)  |               | .0001 (2.37)  |
| Firm bankrupt         |               | -.0679 (0.73) |               | .0259 (1.07)  |
| Firm delinquent       |               | .1667 (7.47)  |               | .0763 (8.59)  |
| Owner delinquent      |               | -.0224 (0.76) |               | .0184 (2.34)  |
| Owner bankrupt        |               | -.0917 (1.55) |               | .0312 (1.60)  |
| Owner judgments       |               | .0588 (1.08)  |               | .0294 (1.79)  |
| D & B credit score    | No            | 5             | No            | 5             |
| Organization type     | No            | 9             | No            | 9             |
| Regional dummies      | No            | 9             | No            | 9             |
| Industry dummies      | No            | 38            | No            | 38            |
| Pseudo R <sup>2</sup> | .0305         | .2028         | .0051         | .2384         |
| N                     | 4181          | 4146          | 4181          | 3851          |

Source: 2003 Survey of Small Business Finances. Excluded category white men. T-statistics in parentheses. First imputation method used.

**Table 51. Availability in Chicago-Naperville-Joliet, IL-IN-WI MSA from SBO 2002**

**a) Receipts and the number of firms**

| <i>Construction</i> | # firms | Receipts \$000 | # employer firms | Receipts employer firms \$000 | # employees | Annual Payroll \$000 |
|---------------------|---------|----------------|------------------|-------------------------------|-------------|----------------------|
| Total # firms       | 81,821  | 49,837,725     | 22,224           | 46,557,957                    | 230,385     | 10,828,193           |
| Female-owned        | 7,522   | 3,371,419      | 2,237            | 3,197,717                     | 20,988      | 966,915              |
| Hispanic or Latino  | 4,926   | n/a            | 674              | 804,896                       | 4,725       | 197,181              |
| Black               | 2,816   | n/a            | 277              | 441,340                       | 2,581       | 101,474              |
| American Indian     | 313     | 77,105         | n/a              | n/a                           | n/a         | n/a                  |
| Asian               | 819     | n/a            | 176              | 308,486                       | 1,616       | 80,249               |

**b) Rates**

| <i>Construction</i>            | 2002   | 2002         |
|--------------------------------|--------|--------------|
| Total # firms                  | 81,821 |              |
| Female-owned                   | 7,522  | 9.2%         |
| Hispanic or Latino             | 4,926  | 6.0%         |
| Black                          | 2,816  | 3.4%         |
| American Indian                | 313    | 0.4%         |
| Asian                          | 819    | 1.0%         |
| <b>Total MWBE availability</b> |        | <b>20.0%</b> |

**c) Averages**

| <i>Construction</i> | Average Sales | % employer firms | Average receipts employer firms | Average # employees |
|---------------------|---------------|------------------|---------------------------------|---------------------|
| Total # firms       | \$609         | 27.2%            | \$2,095                         | 10                  |
| Female-owned        | \$448         | 29.7%            | \$1,429                         | 9                   |
| Hispanic or Latino  |               | 13.7%            | \$1,194                         | 7                   |
| Black               |               | 9.8%             | \$1,593                         | 9                   |
| American Indian     | \$246         |                  |                                 |                     |

Table 52. Median Net Worth and Median Net Worth Excluding Home Equity of Households by Monthly Household Income Quintile and Race and Hispanic Origin of Householder: 2000 and 2002 (2002 dollars)

|                                   | Total          |                | Non-Hispanic White |               | Black         |               | Asian or Pacific Islander | Hispanic <sup>2</sup> |              |
|-----------------------------------|----------------|----------------|--------------------|---------------|---------------|---------------|---------------------------|-----------------------|--------------|
|                                   | 2002           | 2000           | 2002               | 2000          | 2002          | 2000          | 2002                      | 2002                  | 2000         |
| <b>All households (thousands)</b> | <b>110,052</b> | <b>104,644</b> | <b>81,777</b>      | <b>79,562</b> | <b>13,466</b> | <b>12,808</b> | <b>3,639</b>              | <b>11,078</b>         | <b>9,264</b> |
| Median net worth                  | 58,905         | 58,988         | 87,056             | 85,157        | 5,446         | 8,044         | 59,292                    | 7,950                 | 10,457       |
| Excluding home equity             | 10,500         | 14,450         | 19,079             | 24,202        | 1,102         | 1,251         | 15,244                    | 2,300                 | 1,984        |
| <b>Net Worth by Income</b>        |                |                |                    |               |               |               |                           |                       |              |
| <b>Lowest Quintile:</b>           |                |                |                    |               |               |               |                           |                       |              |
| Households (thousands)            | 22,036         | 20,937         | 14,280             | 13,992        | 4,538         | 4,007         | 552                       | 2,634                 | 2,314        |
| Median net worth                  | 5,466          | 7,932          | 21,558             | 25,740        | (NA)          | 61            | 1,600                     | 1,229                 | 536          |
| Excluding home equity             | 1,500          | 1,099          | 3,250              | 3,717         | (NA)          | (NA)          | 750                       | 200                   | 54           |
| <b>Second Quintile:</b>           |                |                |                    |               |               |               |                           |                       |              |
| Households (thousands)            | 21,989         | 20,937         | 15,623             | 15,274        | 2,946         | 2,943         | 590                       | 2,849                 | 2,296        |
| Median net worth                  | 29,517         | 28,904         | 55,892             | 52,016        | 4,348         | 5,657         | 9,600                     | 4,400                 | 6,081        |
| Excluding home equity             | 5,446          | 6,809          | 9,250              | 11,610        | 850           | 1,207         | 4,699                     | 2,100                 | 1,609        |
| <b>Third Quintile:</b>            |                |                |                    |               |               |               |                           |                       |              |
| Households (thousands)            | 22,006         | 20,913         | 16,382             | 16,054        | 2,541         | 2,436         | 741                       | 2,382                 | 1,905        |
| Median net worth                  | 48,200         | 47,619         | 67,392             | 63,814        | 13,026        | 12,334        | 34,386                    | 9,826                 | 12,012       |
| Excluding home equity             | 9,506          | 13,227         | 14,250             | 18,662        | 3,292         | 3,593         | 12,700                    | 2,450                 | 2,842        |
| <b>Fourth Quintile:</b>           |                |                |                    |               |               |               |                           |                       |              |
| Households (thousands)            | 22,018         | 20,935         | 17,173             | 16,724        | 2,100         | 1,917         | 705                       | 1,958                 | 1,669        |
| Median net worth                  | 83,127         | 83,656         | 102,351            | 99,573        | 26,953        | 34,964        | 69,924                    | 37,838                | 38,851       |
| Excluding home equity             | 22,196         | 28,955         | 29,747             | 36,932        | 6,000         | 9,250         | 29,508                    | 5,925                 | 11,307       |
| <b>Highest Quintile:</b>          |                |                |                    |               |               |               |                           |                       |              |
| Households (thousands)            | 22,003         | 20,923         | 18,319             | 17,518        | 1,341         | 1,505         | 1,051                     | 1,255                 | 1,080        |
| Median net worth                  | 188,712        | 198,949        | 210,298            | 223,105       | 61,000        | 69,864        | 195,461                   | 80,600                | 78,327       |
| Excluding home equity             | 76,753         | 105,652        | 91,600             | 124,043       | 17,836        | 22,496        | 55,450                    | 19,015                | 27,498       |

(NA) Not available.

1 Quintile upper limits for 2002 were: lowest quintile—\$1,380; second quintile—\$2,555; third quintile—\$4,040; fourth quintile—\$6,501.

Upper limits for 2000 were: lowest quintile—\$1,399; second quintile—\$2,602; third quintile—\$4,089; fourth quintile—\$6,422.

2 Hispanics may be any race. No data are available for Asians/Pacific Islanders in 2000.

Source: U.S. Census Bureau, Survey of Income and Program Participation, 1996 and 2001 Panels. Gottschalk (2008) -

<http://www.census.gov/prod/2008pubs/p70-115.pdf>

Table 53. Percentage Distribution of Net Worth of Households by Asset Type and Race and Hispanic Origin of Householder: 2000 and 2002 (per cent)

|  | Total |      | Non-Hispanic White |      | Black |       | Asian or Pacific Islander | Hispanic <sup>2</sup> |      |
|--|-------|------|--------------------|------|-------|-------|---------------------------|-----------------------|------|
|  | 2002  | 2000 | 2002               | 2000 | 2002  | 2000  | 2002                      | 2002                  | 2000 |
| Interest-earning assets                  |       |      |                    |      |       |       |                           |                       |      |
| at financial institutions                | 7.4   | 8.9  | 7.6                | 9.2  | 4.4   | 6.6   | 6.6                       | 6.4                   | 6.7  |
| Other interest-earning assets            | 2.4   | 1.7  | 2.5                | 1.8  | 1.3   | 0.8   | 1.2                       | 0.5                   | 0.5  |
| Regular checking accounts                | 0.3   | 0.3  | 0.3                | 0.3  | 0.5   | 0.5   | 0.5                       | 0.6                   | 0.9  |
| Stocks and mutual fund shares            | 11.4  | 15.6 | 11.7               | 16.2 | 5.4   | 4.0   | 12.6                      | 7.0                   | 8.3  |
| Equity in own home                       | 41.7  | 32.3 | 40.3               | 31.0 | 61.1  | 61.8  | 42.7                      | 58.5                  | 50.8 |
| Rental property                          | 6.1   | 3.7  | 5.9                | 3.6  | 6.4   | 5.6   | 11.2                      | 7.1                   | 4.7  |
| Other real estate                        | 3.7   | 3.6  | 3.9                | 3.7  | 2.7   | 2.9   | 1.8                       | 1.8                   | 4.3  |
| Vehicles                                 | 2.5   | 3.7  | 2.4                | 3.5  | 4.1   | 9.7   | 1.9                       | 3.2                   | 5.9  |
| Business or profession                   | 6.3   | 7.7  | 6.2                | 7.6  | 8.4   | 5.2   | 5.8                       | 8.8                   | 10.5 |
| U.S. savings bonds                       | 0.4   | 0.5  | 0.4                | 0.5  | 0.3   | 0.3   | 0.2                       | 0.4                   | 0.3  |
| IRA or Keogh accounts                    | 7.4   | 8.6  | 7.8                | 9.0  | 3.7   | 2.3   | 4.0                       | 3.0                   | 5.3  |
| 401K and Thrift Savings Plans            | 8.2   | 9.7  | 8.1                | 9.6  | 11.7  | 6.7   | 7.1                       | 7.3                   | 9.9  |
| Other financial investments <sup>2</sup> | 2.7   | 1.6  | 2.8                | 1.6  | 0.4   | 0.9   | 1.3                       | 1.7                   | 2.7  |
| Unsecured liabilities <sup>3</sup>       | -3.2  | -3.0 | -2.9               | -2.6 | -10.5 | -11.0 | -3.2                      | -6.3                  | -8.7 |

(NA) Not available.

<sup>1</sup> Hispanics may be any race.

<sup>2</sup> Includes mortgages held for sale of real estate, amount due from sale of business or property, and other financial assets.

<sup>3</sup> Because net worth is assets less liabilities, unsecured liabilities are subtracted from the distribution of net worth and are shown as negative.

Note: Individual outliers that highly influenced the mean value for asset categories were topcoded or excluded. The mean is used to calculate the percent distribution. Applying outlier adjustments to the individual assets but not to the totals caused these columns not to sum to 100 percent.

Source: U.S. Census Bureau, Survey of Income and Program Participation, 1996 and 2001 Panels.

Table 54a. Summary of MWBE Participation in Contracts Awarded by MnDOT 1996-1999

| Year  | Total Federal \$ | Minority men \$ | %    | Minority Women \$ | %    | Caucasian Women \$ | %    | Total MWBE \$ awarded | %     |
|-------|------------------|-----------------|------|-------------------|------|--------------------|------|-----------------------|-------|
| FFY96 | \$209,964,333    | \$3,467,523     | 1.65 | \$176,480         | 0.08 | \$20,056,922       | 9.55 | \$23,700,825          | 11.29 |
| FFY97 | \$241,031,074    | \$6,002,497     | 2.49 | \$108,519         | 0.05 | \$19,441,750       | 8.07 | \$25,552,766          | 10.80 |
| FFY98 | \$285,081,558    | \$6,589,434     | 2.31 | \$129,647         | 0.04 | \$22,515,424       | 7.89 | \$29,234,500          | 10.25 |
| FFY99 | \$295,835,471    | \$841,239       | 0.28 | \$40,028          | 0.01 | \$5,761,276        | 1.95 | \$6,642,543           | 2.25  |

Table 54b. Summary of MWBE Participation in Contracts Awarded by MnDOT 2000Q1-2004Q1

| Year     | Total Federal \$ | Minority Men \$ | %    | Women \$       | %    | Total MWBE \$  | Total MWBE % |
|----------|------------------|-----------------|------|----------------|------|----------------|--------------|
| Q1-FFY00 | \$22,099,798.27  | \$0             | 0    | \$0            | 0    | \$0            | 0            |
| Q2-FFY00 | \$55,219,499.00  | \$0             | 0    | \$126,224.00   | 0.23 | \$126,224.00   | 0.2          |
| Q3-FFY00 | \$172,252,885.00 | \$353,805.00    | 0.21 | \$2,005,974.00 | 1.16 | \$2,359,779.00 | 1.4          |
| Q4-FFY00 | \$79,898,976.00  | \$1,128,366.51  | 1.41 | \$3,364,234.50 | 4.21 | \$4,492,601.02 | 5.6          |
| FFY00    | \$329,471,158.27 | \$1,482,171.51  | 0.45 | \$5,496,432.50 | 1.67 | \$6,978,604.03 | 2.1          |
|          |                  |                 |      |                |      |                |              |
| Q1-FFY01 | \$14,184,474.65  | \$1,003,401.33  | 7.07 | \$234,880.11   | 1.66 | \$1,238,281.51 | 8.7          |



Chart 1. Annual employment growth, USA 1958-2008

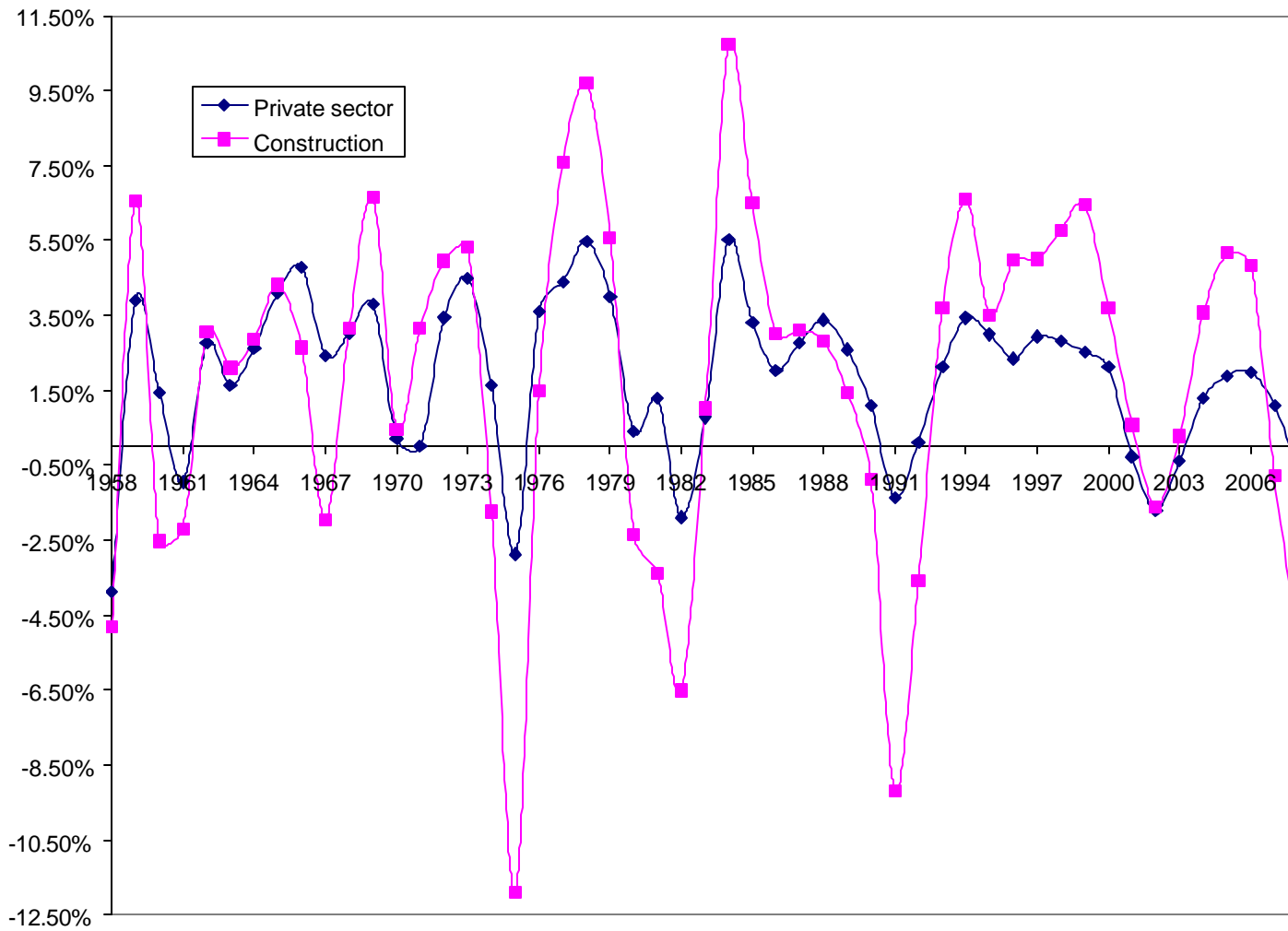
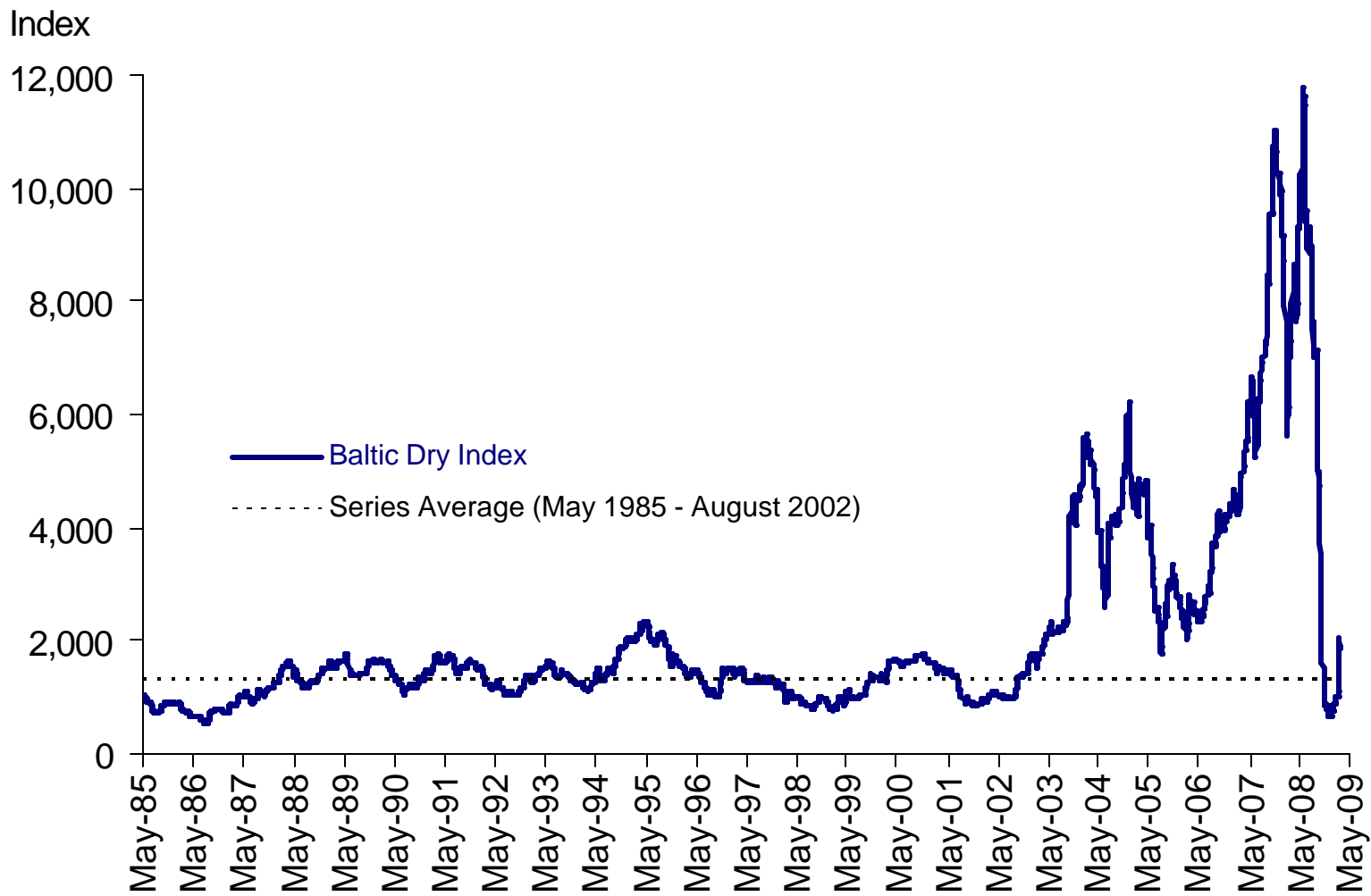
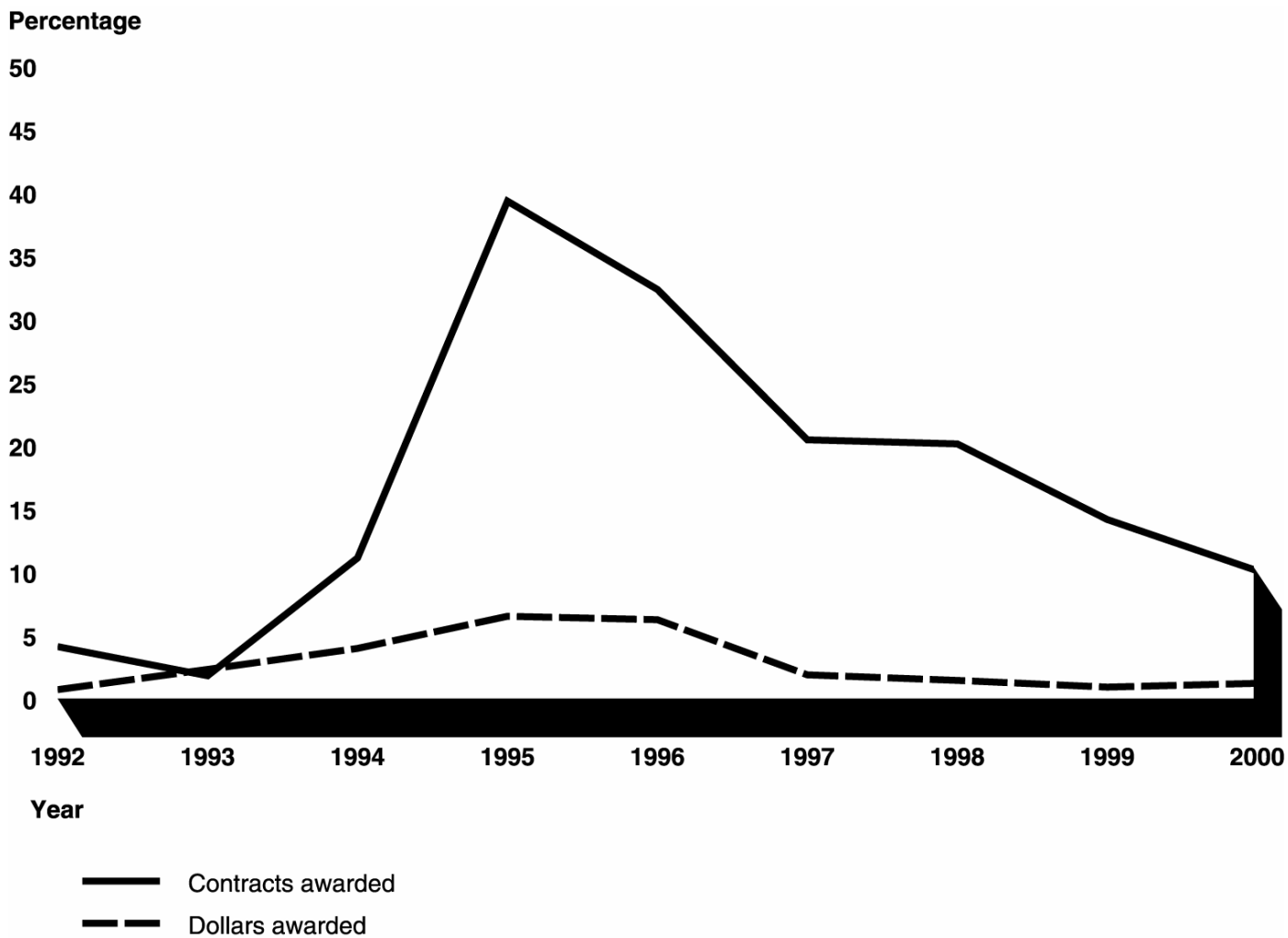


Chart 2. Baltic Dry Index



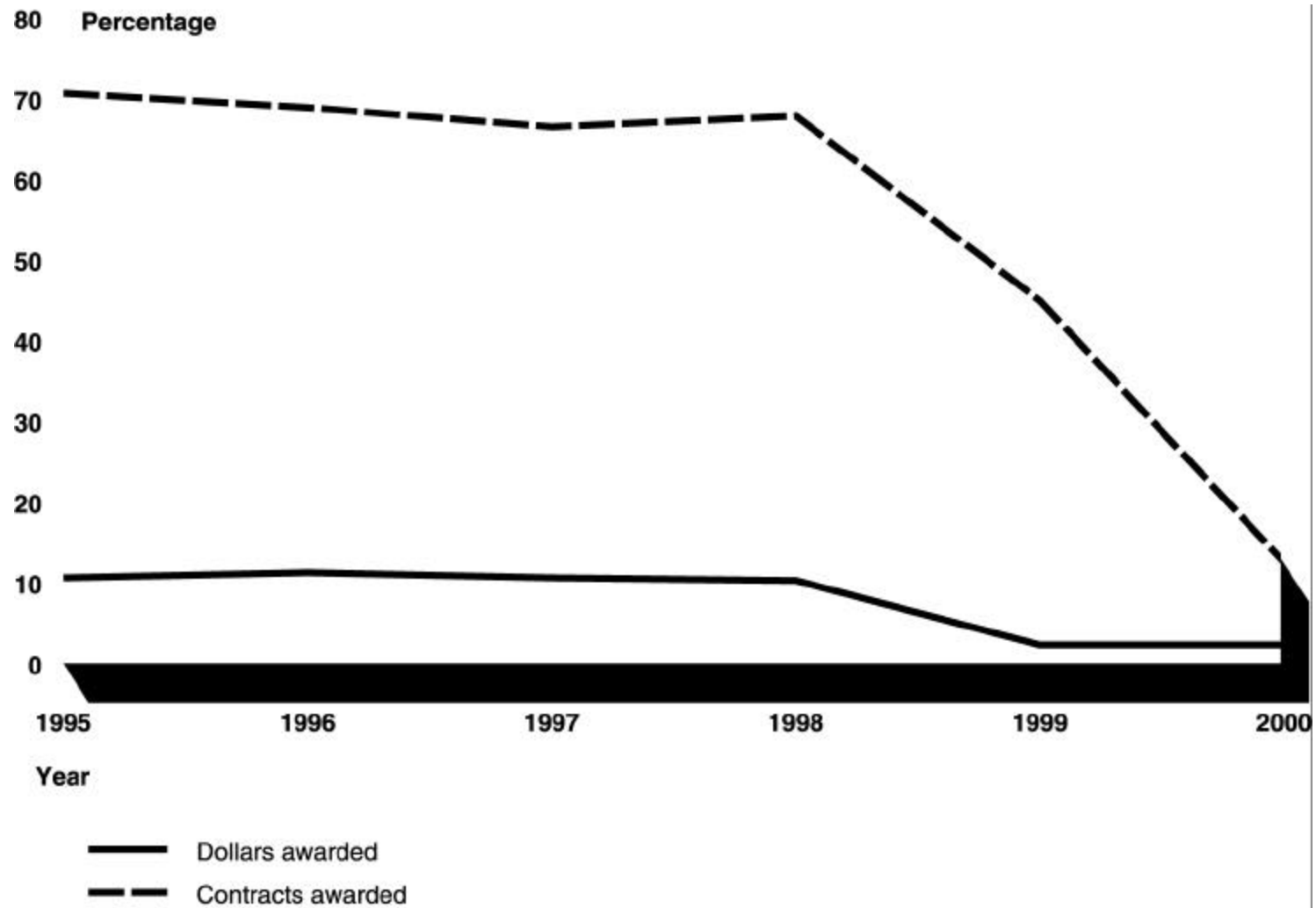
Source: Thomson Datastream

**Chart 3: MWBEs' Participation in Louisiana's State-Funded Transportation Contracting, 1992-2000**  
 (Source: GAO's analysis of data from Louisiana's Department of Transportation)





**Chart 4:** DBEs' Participation in Federal Transportation Contracting in Minnesota, 1995-2000  
(Source: GAO's analysis of data from Minnesota's Department of Transportation).



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Data Appendix Table 1. US Economic Indicators, January 2006-January 2009

|        | (1)  | (2)   | (3)  | (4)  | (5)   | (6)  | (7)  | (8)  | (9) | (10) | (11) | (12) |
|--------|------|-------|------|------|-------|------|------|------|-----|------|------|------|
| Jan-06 | 10.4 | 14.7  | 2273 | 2212 | 106.8 | 91.2 | 27.0 | 0.6  | 3.3 | 2.2  | 3.1  | 3.2  |
| Feb-06 | 8.4  | 13.8  | 2119 | 2141 | 102.7 | 86.7 | 27.4 | 0.6  | 3.5 | 2.6  | 3.3  | 3.4  |
| Mar-06 | 7.2  | 12.3  | 1969 | 2118 | 107.5 | 88.9 | 28.3 | 0.7  | 3.6 | 3.1  | 3.4  | 3.6  |
| Apr-06 | 4.0  | 11.2  | 1821 | 1998 | 109.8 | 87.4 | 29.4 | 0.6  | 3.9 | 1.9  | 3.1  | 3.5  |
| May-06 | 5.3  | 10.0  | 1942 | 1905 | 104.7 | 79.1 | 29.1 | 0.5  | 3.8 | 1.4  | 3.5  | 3.0  |
| Jun-06 | 0.1  | 8.6   | 1802 | 1867 | 105.4 | 84.9 | 28.0 | 0.4  | 4.0 | 0.5  | 2.5  | 2.8  |
| Jul-06 | 1.0  | 7.2   | 1737 | 1763 | 107.0 | 84.7 | 28.6 | 0.2  | 3.9 | 0.6  | 2.4  | 2.5  |
| Aug-06 | -2.2 | 5.7   | 1650 | 1722 | 100.2 | 82.0 | 24.5 | 0.2  | 4.0 | 0.6  | 2.6  | 5.9  |
| Sep-06 | -1.8 | 4.3   | 1720 | 1655 | 105.9 | 85.4 | 26.2 | 0.3  | 4.1 | 0.6  | 3.0  | 3.7  |
| Oct-06 | -4.4 | 3.0   | 1491 | 1570 | 105.1 | 93.6 | 25.6 | 0.3  | 4.0 | 0.3  | 3.4  | 4.0  |
| Nov-06 | -3.4 | 1.8   | 1570 | 1535 | 105.3 | 92.1 | 25.7 | 0.3  | 4.1 | -0.2 | 3.1  | 3.5  |
| Dec-06 | -0.2 | 0.7   | 1649 | 1638 | 110.0 | 91.7 | 27.6 | 0.4  | 4.3 | 0.3  | 3.2  | 3.2  |
| Jan-07 | -3.0 | -0.1  | 1382 | 1585 | 110.2 | 96.9 | 29.6 | 0.5  | 4.2 | 1.0  | 3.3  | 3.3  |
| Feb-07 | -1.0 | -0.8  | 1486 | 1580 | 111.2 | 91.3 | 27.8 | 0.4  | 4.1 | 1.8  | 3.1  | 3.4  |
| Mar-07 | -0.1 | -1.3  | 1492 | 1578 | 108.2 | 88.4 | 30.3 | 0.4  | 4.1 | 1.8  | 3.0  | 3.5  |
| Apr-07 | -1.2 | -2.1  | 1487 | 1489 | 106.3 | 87.1 | 29.0 | 0.3  | 3.9 | 1.7  | 2.9  | 3.0  |
| May-07 | -2.5 | -2.8  | 1436 | 1522 | 108.5 | 88.3 | 29.1 | 0.2  | 4.1 | 1.7  | 3.0  | 3.0  |
| Jun-07 | -0.1 | -3.4  | 1458 | 1433 | 105.3 | 85.3 | 27.6 | 0.2  | 4.1 | 1.3  | 2.9  | 2.8  |
| Jul-07 | -0.7 | -3.8  | 1371 | 1386 | 111.9 | 90.4 | 30.0 | 0.2  | 4.2 | 1.2  | 2.6  | 3.2  |
| Aug-07 | 0.2  | -4.3  | 1337 | 1343 | 105.6 | 83.4 | 27.5 | 0.1  | 4.0 | 0.3  | 3.1  | 3.4  |
| Sep-07 | -4.7 | -4.9  | 1185 | 1277 | 99.5  | 83.4 | 25.6 | 0.0  | 4.1 | 0.7  | 2.9  | 2.9  |
| Oct-07 | -5.6 | -6.1  | 1275 | 1182 | 95.2  | 80.9 | 24.1 | 0.0  | 3.9 | 0.8  | 2.2  | 2.2  |
| Nov-07 | -3.9 | -7.7  | 1179 | 1187 | 87.8  | 76.1 | 23.3 | 0.1  | 3.9 | 1.9  | 2.5  | 1.8  |
| Dec-07 | -6.6 | -9.0  | 1000 | 1111 | 90.6  | 75.5 | 23.6 | 0.3  | 3.7 | 1.5  | 1.9  | 1.6  |
| Jan-08 | -5.3 | -10.7 | 1064 | 1052 | 87.3  | 78.4 | 23.8 | 0.3  | 3.8 | 1.1  | 1.7  | 0.8  |
| Feb-08 | -8.4 | -12.7 | 1107 | 981  | 76.4  | 70.8 | 21.5 | 0.1  | 3.8 | -0.3 | 1.2  | 0.5  |
| Mar-08 | -8.0 | -14.3 | 988  | 932  | 65.9  | 69.5 | 19.2 | -0.1 | 3.9 | -0.5 | 1.5  | 0.4  |
| Apr-08 | -8.5 | -15.2 | 1004 | 982  | 62.8  | 62.6 | 17.1 | -0.3 | 3.8 | -0.5 | 1.3  | 0.7  |
| May-08 | -6.6 | -15.8 | 982  | 978  | 58.1  | 59.8 | 16.1 | -0.4 | 3.7 | 0.5  | 1.4  | 6.1  |
| Jun-08 | -6.1 | -15.9 | 1089 | 1138 | 51.0  | 56.4 | 14.1 | -0.4 | 3.6 | 0.9  | 1.1  | 3.2  |
| Jul-08 | -8.0 | -16.3 | 949  | 937  | 51.9  | 61.2 | 13.6 | -0.4 | 3.5 | 0.9  | 0.2  | 1.2  |

|        |       |       |     |     |      |      |      |      |     |      |      |      |
|--------|-------|-------|-----|-----|------|------|------|------|-----|------|------|------|
| Aug-08 | -9.5  | -16.6 | 854 | 857 | 58.5 | 63.0 | 13.5 | -0.5 | 3.8 | 0.0  | -0.2 | -0.2 |
| Sep-08 | -9.1  | -17.4 | 824 | 805 | 61.4 | 70.3 | 12.6 | -0.5 | 3.6 | -1.3 | -0.6 | -0.4 |
| Oct-08 | -9.8  | -18.1 | 767 | 730 | 38.8 | 57.6 | 9.0  | -0.6 | 3.9 | -3.2 | -1.1 | 0.2  |
| Nov-08 | -13.6 | -18.2 | 651 | 615 | 44.7 | 55.3 | 8.7  | -0.8 | 3.9 | -5.1 | -1.2 | 1.2  |
| Dec-08 | -15.3 |       | 550 | 547 | 38.6 | 60.1 | 6.5  | -1.1 | 4.0 | -6.8 | -1.7 | 1.3  |
| Jan-09 |       |       |     |     | 37.7 | 61.2 | 7.2  | -1.3 | 3.9 |      |      |      |

#### Notes to Data Appendix Table 1

Column 1. Median house prices of existing one family homes National Association of Realtors % oya

Column 2. 20 city house price index - S & P / Case-Shiller % oya

Column 3. Housing starts - Census Bureau. Annualized level, thousands of units

Column 4. Permits to build - Census Bureau. Annualized level, thousands of units

Column 5. Consumer Confidence - Conference Board Index

Column 6. Consumer Confidence - Reuters / University of Michigan Index

Column 7. Consumer Confidence – - Conference Board % saying jobs are plentiful

Column 8. Private non-farm payrolls - Bureau of Labor Statistics % change, three months on previous three months

Column 9. Average hourly earnings - Census Bureau % oya

Column 10. Nominal Retail Sales - Bureau of Economic Analysis % change, three months on previous three months

Column 11. Real consumption - Bureau of Economic Analysis % oya

Column 12. Real personal disposable income - % oya

All data are seasonally adjusted except columns 1,2 and 6.

Source: see also David Blanchflower (2008), 'Inflation, expectations and monetary policy'

<http://www.bankofengland.co.uk/publications/speeches/speaker.htm#blanchflower>



Data Appendix Table 2. Distribution of businesses by Ownership Characteristics, 2002

|                               | # of firms | Sales (\$1,000)  | Average sales (\$1,000) | # firms with employees | Firms with employees sales (\$1,000) | # employees | Annual payroll  |
|-------------------------------|------------|------------------|-------------------------|------------------------|--------------------------------------|-------------|-----------------|
| <i>All firms</i>              | 22,974,685 | \$22,627,167,224 | \$985                   | 5,524,813              | \$21,859,757,616                     | 110,786,416 | \$3,813,488,135 |
| Female-owned                  | 6,489,483  | \$940,774,986    | \$145                   | 916,768                | \$804,097,284                        | 7,146,229   | \$173,709,355   |
| Male-owned                    | 13,184,529 | \$7,073,165,095  | \$536                   | 3,525,299              | \$6,576,056,323                      | 42,502,789  | \$1,322,191,679 |
| Equally male-/female-owned    | 2,693,171  | \$731,447,044    | \$272                   | 717,880                | \$627,004,155                        | 5,663,453   | \$129,675,605   |
| Publicly held and other firms | 494,253    | \$13,833,816,063 | \$27,989                | 352,697                | \$13,810,783,081                     | 55,358,624  | \$2,184,983,744 |
| Hispanic or Latino            | 1,573,600  | \$221,976,823    | \$141                   | 199,601                | \$179,556,102                        | 1,537,801   | \$36,733,799    |
| Not Hispanic or Latino        | 20,793,413 | \$8,522,506,063  | \$410                   | 4,960,281              | \$7,826,741,510                      | 53,771,351  | \$1,588,690,358 |
| Black or African American     | 1,197,661  | \$88,779,041     | \$74                    | 94,585                 | \$65,933,700                         | 756,697     | \$17,576,171    |
| Asian                         | 1,104,189  | \$326,352,983    | \$296                   | 319,295                | \$290,805,663                        | 2,212,813   | \$55,991,382    |
| <i>Construction</i>           | 2,780,324  | \$1,327,182,303  | \$477                   | 729,843                | \$1,211,944,591                      | 7,003,869   | \$252,713,044   |
| Female-owned                  | 201,791    | \$68,424,738     | \$339                   | 51,707                 | \$62,368,026                         | 455,799     | \$15,977,056    |
| Male-owned                    | 2,285,536  | \$946,982,838    | \$414                   | 563,726                | \$847,862,114                        | 5,003,966   | \$179,662,440   |
| Equally male-/female-owned    | 276,875    | \$94,274,422     | \$340                   | 90,644                 | \$79,883,069                         | 576,333     | \$18,135,972    |
| Publicly held and other firms | 28,749     | \$225,789,449    | \$7,854                 | 23,540                 | \$224,768,364                        | 1,027,183   | \$39,850,603    |
| Hispanic or Latino            | 212,496    | \$31,439,374     | \$148                   | 25,139                 | \$22,655,674                         | 190,076     | \$5,279,187     |
| Not Hispanic or Latino        | 2,551,704  | \$1,078,192,316  | \$423                   | 680,937                | \$967,408,040                        | 5,845,521   | \$208,484,888   |
| Black or African American     | 75,020     | \$9,635,050      | \$128                   | 8,736                  | \$7,506,982                          | 55,145      | \$1,718,104     |
| Asian                         | 38,742     | \$9,720,210      | \$251                   | 7,397                  | \$8,135,150                          | 46,927      | \$1,666,045     |

Source: 2002 Survey of Business Owners - <http://www.census.gov/csd/sbo/>

Data Appendix Table 3. Distribution of businesses by Ownership Characteristics, 1997

|                                    | # of firms | Sales (\$1,000) | # firms with employees | Firms with employees sales (\$1,000) | # employees | Annual payroll (\$1000) |
|------------------------------------|------------|-----------------|------------------------|--------------------------------------|-------------|-------------------------|
| <i>All Firms</i>                   | 20,821,935 | 18,553,243,047  | 5,295,152              | 17,907,940,321                       | 103,359,815 | 2,936,492,940           |
| Total minorities                   | 3,039,033  | 591,259,123     | 615,222                | 516,979,920                          | 4,514,699   | 95,528,782              |
| Black                              | 823,499    | 71,214,662      | 93,235                 | 56,377,860                           | 718,341     | 14,322,312              |
| Hispanic                           | 1,199,896  | 186,274,582     | 211,884                | 158,674,537                          | 1,388,746   | 29,830,028              |
| American Indian and Alaska Natives | 197,300    | 34,343,907      | 33,277                 | 29,226,260                           | 298,661     | 6,624,235               |
| Asian and Pacific Islander         | 912,960    | 306,932,982     | 289,999                | 278,294,345                          | 2,203,079   | 46,179,519              |
| Women                              | 5,417,034  | 818,669,084     | 846,780                | 717,763,965                          | 7,076,081   | 149,115,699             |
| <br>                               |            |                 |                        |                                      |             |                         |
| <i>Construction</i>                | 2,333,424  | 944,154,542     | 675,160                | 863,945,192                          | 5,678,306   | 176,476,246             |
| Total minorities                   | 255,251    | 41,883,580      | 55,685                 | 36,477,991                           | 316,446     | 8,039,544               |
| Black                              | 56,508     | 7,712,059       | 12,973                 | 6,587,348                            | 70,928      | 1,510,252               |
| Hispanic                           | 152,573    | 21,923,384      | 31,478                 | 19,146,212                           | 168,873     | 4,218,419               |
| American Indian and Alaska Natives | 27,435     | 5,384,815       | 6,012                  | 4,648,924                            | 38,419      | 1,021,524               |
| Asian and Pacific Islander         | 27,711     | 7,485,505       | 6,398                  | 6,522,807                            | 42,533      | 1,386,303               |
| Women                              | 157,173    | 67,632,059      | 65,707                 | 63,738,665                           | 518,142     | 15,302,000              |

Source: 1997 Economic Census Minority- and Women-Owned Businesses United States

Data Appendix Table 4. Probability of being self-employed in the US private sector (dprobit)

|  | (1)             | (2)             |
|--|-----------------|-----------------|
|  | All industries  | Construction    |
| Age                                    | .0107 (35.26)   | .0272 (15.99)   |
| Age <sup>2</sup>                       | -.00007 (22.52) | -.00022 (11.44) |
| White female                           | -.0357 (22.22)  | -.0913 (8.14)   |
| Black                                  | -.0529 (21.18)  | -.0743 (4.41)   |
| American Indian                        | -.0345 (5.11)   | -.0556 (1.70)   |
| Asian                                  | -.0292 (8.40)   | -.0428 (1.51)   |
| Other races                            | -.0200 (3.82)   | -.0114 (0.40)   |
| Hispanic                               | -.0424 (14.60)  | -.0925 (6.62)   |
| Immigrant                              | .0051 (2.10)    | .0006 (0.05)    |
| 1 <sup>st</sup> -4 <sup>th</sup> grade | .0074 (0.35)    | .1221 (1.32)    |
| 5/6 <sup>th</sup> grade                | .0043 (0.23)    | .1068 (1.27)    |
| 7/8 <sup>th</sup> grade                | .0800 (3.37)    | .2252 (2.52)    |
| 9 <sup>th</sup> grade                  | .0589 (2.61)    | .1806 (2.06)    |
| 10 <sup>th</sup> grade                 | .0795 (3.40)    | .2402 (2.68)    |
| 11 <sup>th</sup> grade                 | .0599 (2.70)    | .1844 (2.12)    |
| 12 <sup>th</sup> grade no diploma      | .0703 (2.99)    | .1711 (1.93)    |
| High school graduate                   | .0747 (3.77)    | .2058 (2.73)    |
| Some college no degree                 | .1061 (4.81)    | .2479 (2.96)    |
| Associate degree – occupational        | .0918 (3.94)    | .2099 (2.41)    |
| Associate degree -- academic           | .1047 (4.37)    | .2194 (2.47)    |
| BA                                     | .1479 (6.30)    | .3133 (3.57)    |
| MA                                     | .1749 (6.56)    | .2905 (3.11)    |
| MBA                                    | .3927 (11.48)   | .1332 (1.03)    |
| PHD                                    | .3203 (9.68)    | .1885 (1.07)    |
| State dummies                          | 50              | 50              |
| Industry dummies                       | 46              | n/a             |
| N                                      | 166,519         | 15,565          |
| Pseudo R <sup>2</sup>                  | .2005           | .0963           |

Source: Outgoing Rotation Group files of the Current Population Survey, 2007.

Notes: excluded categories: white males and 1<sup>st</sup> grade.

## Data Appendix

### **American Community Survey (ACS): Public Use Microdata Sample (PUMS). United States Department of Commerce. Bureau of the Census. ICPSR#3893**

The American Community Survey is a nationwide survey designed to provide communities a fresh look at how they are changing. It will replace the decennial long form in future censuses and is a critical element in the Census Bureau's reengineered 2010 census. The decennial census has two parts: 1) the short form, which counts the population; and 2) the long form, which obtains demographic, housing, social, and economic information from a 1-in-6 sample of households. Information from the long form is used for the administration of federal programs and the distribution of billions of federal dollars. Since this is done only once every 10 years, long-form information becomes out of date. Planners and other data users are reluctant to rely on it for decisions that are expensive and affect the quality of life of thousands of people.

The American Community Survey is a way to provide the data communities need every year instead of once in ten years. The American Community Survey is conducted under the authority of Title 13, United States Code, Sections 141 and 193, and response is mandatory. According to Section 221, persons who do not respond shall be fined not more than \$100. Title 18 U.S.C. Section 3571 and Section 3559, in effect amends Title 13 U.S.C. Section 221 by changing the fine for anyone over 18 years old who refuses or willfully neglects to complete the questionnaire or answer questions posed by census takers from a fine of not more than \$100 to not more than \$5,000. The U.S. Census Bureau may use this information only for statistical purposes. Title 13 requires the Census Bureau to keep all information strictly confidential. Any Census Bureau employee who violates these provisions is subject to a fine of up to \$250,000 or a prison sentence of up to five years, or both.

Full implementation of the American Community Survey is planned in every county of the United States. The survey would include approximately three million households. Data are collected by mail and Census Bureau staff follow up with those who do not respond. The American Community Survey will provide estimates of demographic, housing, social, and economic characteristics every year for all states, as well as for all cities, counties, metropolitan areas, and population groups of 65,000 people or more. For smaller areas, it will take three to five years to accumulate sufficient sample to produce data for areas as small as census tracts. For example, areas of 20,000 to 65,000 can use data averaged over three years. For rural areas and city neighborhoods or population groups of less than 20,000 people, it will take five years to accumulate a sample that is similar to that of the decennial census. These averages can be updated every year. Eventually, the survey will be able to measure changes over time for small areas and population groups.

# EXHIBIT A

## CURRICULUM VITAE

# David Graham Blanchflower

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**Date of birth** March 2nd, 1952.  
**Nationality** Dual US and UK citizen.  
**Children** Daniel John aged 18; Jennie aged 21 and Kathryn aged 23.

### Qualifications

1973 B.A. Soc. Sci. (Economics), University of Leicester, UK.  
1975 Postgraduate Certificate in Education - (PGCE). Pass with distinction in teaching; Dudley College of Education, University of Birmingham, UK.  
1981 M.Sc. (Econ), University of Wales, UK.  
1985 Ph.D., University of London (Queen Mary College) UK.  
1996 M.A. (Honorary), Dartmouth College.  
1996 Honorary member of Phi Beta Kappa, Dartmouth chapter.  
2007 Honorary Doctor of Letters (D.Litt) for 'services to economics', University of Leicester, UK.  
2009 Honorary Doctor of Science (D.Sc), Queen Mary, University of London, to be awarded in July 2009.

### Previous positions

Northcote High School, Wolverhampton, UK, teacher, 1975-1976.  
Kilburn Polytechnic, London, UK, Lecturer, 1976-1977.  
Farnborough College of Technology, Hampshire, UK, Lecturer, 1977-1979.  
Institute for Employment Research, University of Warwick, UK, Research Officer, September 1984-July 1986.  
Department of Economics, University of Surrey, UK Assistant Professor (Lecturer), August 1986-August 1989.  
Member Monetary Policy Committee, Bank of England, June 2006-June 2009,  
<http://www.bankofengland.co.uk/monetarypolicy/overview.htm>

### Current positions

Department of Economics, Dartmouth College Associate Professor, July 1989-June 1993.  
Professor, July 1993 - present, [www.dartmouth.edu/~economic](http://www.dartmouth.edu/~economic)  
Department Chair, July 1998 – June 2000.

Associate Dean of the Faculty for the Social Sciences, July 2000-June 2001.

Bruce V. Rauner Professor of Economics, 2001-

Research Associate, National Bureau of Economic Research, [www.nber.org](http://www.nber.org)

Research Fellow, CESifo at the Centre for Economic Studies at the University of Munich in Germany, [www.CESifo.de](http://www.CESifo.de)

Director of the Future of Labor Programme, and Research Fellow, The Institute for the Study of Labor (IZA) at the University of Bonn in Germany, [www.iza.org](http://www.iza.org)

Visiting Professor of Economics, Department of Economics, University of Stirling, September 2006-, [www.economics.stir.ac.uk](http://www.economics.stir.ac.uk)

### **Editorial positions**

Member of Editorial Board of Industrial & Labor Relations Review, 1996-1999.

Member of Editorial Board of Small Business Economics, 2000-2005.

Member of Editorial Board of Scottish Journal of Political Economy, 2000-2005.

### **Prizes and Awards**

Princeton University's Richard A. Lester Prize for 'the most outstanding book in Industrial Relations and Labor Economics published in 1994'.

I was named the 'Business person of the year' by the *Daily Telegraph*, in their Great Britons of 2008 awards on 30<sup>th</sup> December 2008. Citation said

"Not only did David Blanchflower foresee the scale of the recession months before the eventual impact, he attempted to do something about it. He was the one Bank of England executive who consistently argued in favour of dramatically lower interest rates. He was the first policy-maker from the Bank, Treasury or Financial Services Authority to warn that the UK faced recession and the possibility of house prices falling by a third. Blanchflower has decided against taking up a second three-year term on the MPC; the Bank of England will be the weaker for his absence."

(<http://www.telegraph.co.uk/topics/great-britons/>)

### **Teaching**

Statistics, Labor Economics, Advanced Labor Economics, Microeconomics and Econometrics.

### **Papers, speeches and publications**

2009

With Conall Mac Coille, 'The formation of inflation expectations: an empirical analysis for the UK', paper presented at Banco do Brasil X1 Annual Inflation Targeting Seminar, Rio de Janeiro, May 2009.

With Andrew Oswald, 'The U-Shape without controls: a response to Glenn', forthcoming in Social Science and Medicine.

'Minority self-employment in the United States and the impact of affirmative action programs', Annals of Finance, 5:3-4, pp. 361-396.

With Andrew J. Oswald and Bert Van Landeghem, 'Imitative obesity and relative utility', Journal of the European Economic Association, 7:2/3, April, pp. 528-538.

With Chris Shadforth, 'Fear, unemployment and migration', The Economic Journal, 119(535), February, pp. F136-F182.

With Alex Bryson, 'The wage impact of trade unions in the UK public and private sectors', forthcoming in Economica.

'Where next for the UK economy?', Scottish Journal of Political Economy, 56(1), February, pp. 1-23.

With Helen Lawton, 'The impact of the recent expansion of the EU on the UK labour market', forthcoming in EU Enlargement and the Labor Markets, edited by Martin Kahanec and Klaus F. Zimmermann, IZA and Praeger.

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'International evidence on well-being', forthcoming in National Time Accounting and Subjective Well-Being, NBER and University of Chicago Press edited by Alan Krueger.

'The UK economy', Royal Economic Society Newsletter, 144, January, 2009.

With David Bell, 'What to do about rising unemployment in the UK?', SCOTECON.

'Macroeconomic policy responses in the UK', Leverhulme Economic Policy Lecture, University of Nottingham, January 28<sup>th</sup>, 2009.

'What should be done about rising unemployment in the UK?'. Speech given at the University of Stirling, 25<sup>th</sup> February, 2009.

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2008



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## 2007

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#### 2006

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'Reflections on my first four votes on the MPC', Bank of England Quarterly Bulletin, pp. 456-463, 2006Q4, 46(4).

#### 2005

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#### 2004

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### 2003

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1996

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CONSULTING ACTIVITIES - Blanchflower Consulting LLC

### 1) Governments and Government Departments

- a) UK Departments of Employment (1983-1989) and the Environment (1995-1996); consultant.
- b) US Department of Labor, 1996.
- c) Swedish Ministry of Employment, 1995.
- d) Congressional Budget Office Panel of Economic Advisors; expert witness, 1994.
- e) US Department of Justice (as intervenors), 2000

### 2) International Bodies

- a) Organisation of Economic Cooperation and Development, Paris, 1994-2000. Consultant on labor market issues.
- b) International Labour Organisation, 1997-1999.

### 3) Banks

- a) New York Federal Reserve Bank, 1996. Consultant to help improve the Bank's research methods.
- b) Board of Governors of the Federal Reserve, 1997-2003. Consultant on pay setting for executives.

### 4) Consulting Firms

- a) National Economic Research Associates, Cambridge Massachusetts, 1994-2006
- b) National Economic Research Associates, London, UK, 1994-2002
- c) London Economics, London, UK, 1994-2000
- d) New Bridge Street Consultants, 1986-7.

For all of these firms I help to write reports and provide general assistance as needed on labor market issues, with special emphasis on pay determination and discrimination.

### 5) Law Firms

I work for various law and consulting firms preparing evaluations of losses of earnings in personal injury, medical malpractice, discrimination and wrongful death cases for both defendants and plaintiffs.

### 6) Private sector firms

- a) London Electricity (UK), 1993. Provided a report on appropriate wage structure to use in evidence to the government Regulator.

- b) Tesco (UK), 1996. Acted as consultant for the biggest retail chain in the UK to help them in determining an appropriate pay strategy.
- c) Visa, 1998. Writing a series of papers on the role of credit cards. In collaboration with NERA.
- d) Microsoft, 1999-2000.
- e) Marsh McLennan, 2007.

#### 7) Trade unions

- a) General, Municipal and Boilermakers Union, UK - consultant.
- b) Union of Shop, Allied and Distributive Trades (USDAW), UK - consultant.

#### 8) Public Sector Bodies

- a) New York State Judicial Pay Commission. Consultant on how to set the pay of New York state judges, 1997
- b) Board of Governors of the Federal Reserve. Consultant on how to set the pay of executives in the Federal Reserve Banks and Branches, 1998-2002.
- c) Associations of Local Government in London and the South East. Consultant on pay setting. In collaboration with NERA, London, 1998.
- d) Farm Credit Administration. 2001. Consultant on pay setting.
- e) I have also worked for a number of states and municipalities on cases related to minority and women-owned businesses. These include.
  - i) State of Texas Department of Transportation (TXDOT).
  - ii) State of Maryland Department of Transportation (MDOT).
  - iii) Chicago METRA.
  - iv) State of Nebraska Department of Transportation and US Department of Transportation (Gross Seed).
  - v) State of Minnesota Department of Transportation and US Department of Transportation (Sherbrooke Turf).
  - vi) City of Chicago (BAGC vs City of Chicago).
  - vii) City of Jacksonville.
  - viii) City of San Francisco.
  - ix) City and County of Denver (Concrete Works).
  - x) City of St Louis.
  - xi) State of Illinois Department of Transportation (IDOT).
  - xii) City of Baltimore.

- xiii) State of Missouri DOT.
  - xiv) State of Washington DOT.
  - xv) Metropolitan Pier and Exposition Authority, Chicago.
  - xvi) State of Massachusetts
  - xvii) City of Austin, Texas
  - xvii) City of Chicago Public Schools
- 
- f) City of New York in a dispute with the United Federation of Teachers, 2001.
  - g) City of New York in impasse disputes with the Patrolmen's Benevolent Association, 2001, 2004/5.
  - h) Worcestershire County Council, UK, 2004, 2006, 2008-
  - i) Croydon County Council, UK, 2004
  - j) Thames Valley Strategic Health Authority, 2004.
  - k) City of Detroit in an Act 312 dispute regarding police, 2007
  - l) Wayne County Michigan in an Act 312 dispute regarding the pay and conditions of sheriff's deputies, sergeants and lieutenants, 2007
  - m) City of Chicago Public Schools regarding school segregation, 2006-2008
  - n) Wayne/Westland School District, 2008
  - o) City of Chicago, 2000-

9) UK Parliament

As part of my work on the Monetary Policy Committee I testify regularly before the Treasury Select Committee of the House of Commons. I have also testified twice in front of the House of Lords Economic Affairs Committee.

Wednesday, June 3<sup>rd</sup>, 2009

# EXHIBIT B

**QUESTIONNAIRE - CHICAGO AREA CREDIT MARKET SURVEY**

**INTRODUCTION:**

**Hello, my name is \_\_\_\_\_ and I'm calling on behalf of the City of Chicago, Department of Procurement Services. You may have received a letter in the mail from the City of Chicago regarding a survey they are conducting about the Chicago area construction industry.**

**As a construction-related business, you have been randomly chosen to participate in this survey. I assure you all information you share with me today will be kept strictly confidential. The findings of this survey will be reported in the aggregate. Your personal and business related information will not be shared on an individual basis.**

**To begin, I'm going to ask you a series of questions that establish the background about this firm.**

- |  |        |
|--|--------|
| <b>1. Was this firm in business under the current ownership during any part of 2007 or 2008?</b> | Yes/No |
| <b>2. Is this the headquarters or main office of this firm?</b>                                  | Yes/No |
| <b>3. Is this firm a for-profit enterprise?</b>  | Yes/No |
| <b>4. Is this firm independently owned and operated?</b>   | Yes/No |
- IF "NO" for any Q1 through Q4, TERMINATE**

**"Those are all the questions I have for you today. Thank you very much for your time."**

**IF "YES" for all Q1 through Q4, CONTINUE**

**As I mentioned, the City of Chicago is conducting a survey of businesses in the construction industry. Some of the questions I will ask have to do with the finances and capital of the business. Are you the person in the company who is most familiar with this kind of information?**

**If NO, Who is that person? Is he/she available? When would be the best time to call back?**

**If YES, Thank you. I have a few more questions to establish the background on this firm.**

- 5. Excluding owners who worked for the firm, what was the average number of paid full-time employees in 2007?**
- 6. Excluding owners who worked for the firm, what was the average number of paid part-time employees in 2007?**
- 7. Is 51% or more of this firm owned and controlled by one or more of the following racial/ethnic groups?**

African American/Black

Yes/No



|                            |        |
|----------------------------|--------|
| Hispanic Origin (any race) | Yes/No |
| Asian/Pacific Islander     | Yes/No |
| Native American            | Yes/No |

**8. Is 51% or more of this firm owned and controlled by women?** Yes/No

**9. What is the legal form of organization of this firm?**

|                                  |        |
|----------------------------------|--------|
| Sole proprietorship              | Yes/No |
| Partnership                      | Yes/No |
| Subchapter-S corporation         | Yes/No |
| 1120 corporation (C corporation) | Yes/No |
| Limited liability company        | Yes/No |
| Other (specify) _____            |        |

**10. Which category that best describes this business - indicate PRIMARY ONE.**

*Building Construction* – e.g., general contracting for construction of residential, industrial, commercial or other buildings and alteration, repair and renovation.

*Heavy Construction* – e.g., highways, streets, bridges, tunnels, sewers, railroads.

Trade or Subcontractors– e.g., plumbing, heating, roofing, electrical, painting, masonry, carpentry, excavation.

*A/E Services* — e.g., architectural services and structural, civil, mechanical, electrical, other engineering services.

*Construction-Related Services* — e.g., estimating, testing, surveying, construction management, construction inspection, interior design, and telecommunications systems.

*Maintenance Services* — includes any work necessary for the continued operation or upkeep of facilities, structures, buildings, building systems, and grounds, e.g., building cleaning and maintenance services, groundskeeping services.

*Information Technology* — e.g., electronic information-processing hardware and software, maintenance, telecommunications, associated consulting services.

*Commodities* – e.g., office goods and materials, food, printing, building materials, motor vehicles, equipment.

*Other Services* — e.g., property managers, real estate developers, professional, personal, and/or contractual services of attorneys, accountants, physicians, consultants, appraisers, financial services. Does not include maintenance services, A/E services, or construction-related services.

*Other (specify)* \_\_\_\_\_

## PERSONAL CHARACTERISTICS OF OWNERS

The next few questions refer to the principal owner of the firm. For partnerships and corporations, this is typically the partner or shareholder who has the largest ownership share and has the primary authority to make financial decisions. If there are two or more principal owners with equal shares, please choose one who has full financial decision-making authority and answer for that individual.

11. What is the principal owner's age ? \_\_\_\_\_

12. What is the highest level of education reached by the principal owner of this firm?

|  |        |
|--|--------|
| Some high school or less               | Yes/No |
| High school diploma                    | Yes/No |
| Some college                           | Yes/No |
| Trade, vocational, or technical degree | Yes/No |
| Bachelor's degree                      | Yes/No |
| Postgraduate degree                    | Yes/No |

13. How many years of experience has the principal owner had managing or owning a business, including this business? \_\_\_\_\_

14. In what year was the firm founded, purchased, or acquired by the current ownership?

\_\_\_\_\_

### Recent Credit Application

### PROBLEMS FACED BY FIRM

15. What is the single MOST important problem facing this business today? (one only)

- Taxes
- Inflation
- Poor sales
- Cost of labor
- Quality of labor
- Financing and interest rates
- Government regulations
- Competition from larger firms
- Cost and availability of insurance
- Other (Please Specify) \_\_\_\_\_

### Use of Credit and Financing

### PROBLEMS FACED BY FIRM

Throughout the rest of this survey, please answer for the entire company — that is, the main office and all branches and subsidiary companies.

**During 2007 or 2008, did the firm use ...**

16a. Business credit cards to finance business expenses? **Yes/No**

16b. Owners' personal credit cards to finance business expenses? **Yes/No**

16c. The funds from any mortgages? (also count mortgages on personal

16d. Real estate if funds were used for business purposes) **Yes/No**

**17. During the last three years, has the firm applied for credit or asked for a renewal of terms on an existing loan? Include requests for a loan, a line of credit, a renewal of a line of credit, or modifications of the terms of a loan or line of credit, but don't include requests for loans from owners or relatives.** **Yes/No**

**MOST RECENT CREDIT APPLICATION**

**Think about the firm's most recent application for a loan or line of credit--one that was either approved or denied. Don't include applications that the firm withdrew or that are still pending.**

**18. Was this most recent application for a new loan or line of credit, or was it for a renewal or modification of an existing loan or line of credit? (one only)**

New

Existing

**19. When did the firm make this most recent request for a loan or line of credit that was approved or denied?**

\_\_\_\_\_Month \_\_\_\_\_Year

**20. What was the total dollar amount for which the firm applied? If the precise figure is not available, please give an estimate.**

\$\_\_\_\_\_ Amount

**21. What was to be the primary use of the loan or line of credit? (one only)**

Working Capital

Motor Vehicles

Other Equipment or Machinery

Leasehold Improvements

Land and Buildings

Furniture and Fixtures

Other \_\_\_\_\_

**22. Was this most recent application approved?** **Yes/No**

**If Yes, continue to Q23**

**If No (denied) go to Q25.**

**23. What was the dollar value of the credit granted?**

\$\_\_\_\_\_ Amount

**24. Was the interest rate fixed for the entire term of the loan or line of credit? Or could it change during the term? (one only)**

Fixed

Changes during term

**25. What was the original interest rate on this loan or line of credit? If the precise figure is not available, please give an estimate \_\_\_\_\_ %**

**26. Not counting your most recent request, has any particular lender or creditor turned down a request for credit from your firm during the last three years? Yes/No**

### **FIRM'S SALES REVENUES**

**These next questions are about the firm's sales, , and refer to the 2007 calendar year or your firm's most recently completed fiscal year, whichever is more appropriate. Having a recent balance sheet and last year's tax return nearby will be helpful for answering these questions. If precise dollar amounts are not available, please provide an estimate.**

**27. What were the firm's total sales? This amount is often referred to as "gross receipts or sales less returns and allowances."**

\$\_\_\_\_\_ Amount

Respondents may ask: WHERE CAN I FIND INFORMATION ON MY FIRM'S TOTAL SALES? If needed: "You can find this information on the following forms..."

Sole Proprietorship: IRS Form 1040 Schedule C Line 3

Partnership: IRS Form 1065 Line 1c

S-Corporation: IRS Form 1120S Line 1c

Corporation: IRS Form 1120 or 1120A Line 1c

### **CREDIT WORTHINESS**

**These next few questions are to help us understand the credit history of the firm and its principal owner. As a reminder, the principal owner typically has the largest ownership share and the primary authority to make financial decisions.**

**28. Within the past seven years, has the firm declared bankruptcy?** Yes/No

**29. Within the past three years, on how many different business obligations has the firm been 60 or more days delinquent? This includes credit from suppliers.**

Number of different business obligations \_\_\_\_\_

**30. Within the past three years, have any judgments been rendered against the firm? Judgments are court orders or lawsuits requiring either payment or some action. An example of an action is paying damages for breach of contract.** Yes/No

### DISCRIMINATION

**31. In the last five years, has this business been discriminated against on the basis of racial or ethnic heritage, or gender?** Yes/No

IF NO, skip to Q33

IF YES, ask Q32

**32. Has the business been discriminated against...**

32a. Applying for commercial loans Yes/No

32b. Applying for surety bonds Yes/No

32c. Applying for commercial or professional insurance Yes/No

32d. Hiring workers from union hiring halls Yes/No

32e. Obtaining price quotes from suppliers Yes/No

32f. Working or attempting to obtain work on public sector prime contracts Yes/No

32g. Working or attempting to obtain work on public sector subcontracts Yes/No

32h. Working or attempting to obtain work on private sector prime contracts Yes/No

32i. Working or attempting to obtain work on private sector subcontracts Yes/No

32j. Receiving timely payment for work performed Yes/No

32k. Functioning without hindrance or harassment at the work site Yes/No

32l. Joining or dealing with construction trade associations Yes/No

32m. Having to do inappropriate or extra work that was not required of comparable non-minority or non-female firms Yes/No

32n. Having to meet quality, inspection, or performance standards that were not required of comparable non-minority or non-female firms Yes/No

**Have any of the following bid requirements made it harder or impossible to obtain an award?**

33a. Bonding requirements Yes/No

33b. Insurance requirements Yes/No

33c. Previous experience requirements Yes/No

33d. Cost of bidding or proposing Yes/No

33e. Large project sizes Yes/No

33f. Obtaining working capital Yes/No

33g. Late notice of bid/proposal deadlines Yes/No

33h. Prior dealings with public agency or private owner Yes/No

**34. Are you a certified minority-owned business (MBE – Minority Business Enterprise)?** Yes/No

**35. Are you a certified female-owned business (WBE - Women Business Enterprise)?**  
Yes/No

**36. Are you a certified Disadvantaged Business Enterprise (DBE)?** Yes/No  
IF YES TO Q34, 35, or 36 ASK Q37 & Q38

**Are you certified by**

- |                        |        |
|------------------------|--------|
| 37a. City of Chicago   | Yes/No |
| 37b. State of Illinois | Yes/No |
| 37c. Cook County       | Yes/No |
| 37d. Chicago METRA     | Yes/No |
| 37e. other             |        |

**q38. Do prime contractors who use you as a subcontractor on public sector projects with MBE/WBE participation goals also use you on projects without such goals? (If needed: MBE is Minority Business Enterprise, WBE is a Women Business Enterprise? Ye**

# **EXHIBIT C**

## **SIC Codes for DIVISION C. CONSTRUCTION**

### **15 BUILDING CONSTRUCTION-GENERAL CONTRACTORS AND OPERATIVE BUILDERS**

#### **152 GENERAL BUILDING CONTRACTORS-RESIDENTIAL BUILDINGS**

**1521 GENERAL CONTRACTORS-SINGLE-FAMILY HOUSES**

**1522 GENERAL CONTRACTORS-RESIDENTIAL BUILDINGS, OTHER THAN SINGLE-FAMI**

#### **153 OPERATIVE BUILDERS**

**1531 OPERATIVE BUILDERS**

#### **154 GENERAL BUILDING CONTRACTORS-NONRESIDENTIAL BUILDINGS**

**1541 GENERAL CONTRACTORS-INDUSTRIAL BUILDINGS AND WAREHOUSES**

**1542 GENERAL CONTRACTORS-NONRESIDENTIAL BUILDINGS, OTHER THAN INDUSTRI**

### **16 HEAVY CONSTRUCTION OTHER THAN BUILDING CONSTRUCTION-CONTRACTORS**

#### **161 HIGHWAY AND STREET CONSTRUCTION, EXCEPT ELEVATED HIGHWAYS**

**1611 HIGHWAY AND STREET CONSTRUCTION, EXCEPT ELEVATED HIGHWAYS**

#### **162 HEAVY CONSTRUCTION, EXCEPT HIGHWAY AND STREET CONSTRUCTION**

**1622 BRIDGE, TUNNEL, AND ELEVATED HIGHWAY CONSTRUCTION**

**1623 WATER, SEWER, PIPELINE, AND COMMUNICATIONS AND POWER LINE CONSTRU**

**1629 HEAVY CONSTRUCTION, NOT ELSEWHERE CLASSIFIED**

### **17 CONSTRUCTION-SPECIAL TRADE CONTRACTORS**

#### **171 PLUMBING, HEATING AND AIR-CONDITIONING**

**1711 PLUMBING, HEATING AND AIR-CONDITIONING**

#### **172 PAINTING AND PAPER HANGING**

**1721 PAINTING AND PAPER HANGING**



**173 ELECTRICAL WORK**

**1731 ELECTRICAL WORK**

**174 MASONRY, STONEMWORK, TILE SETTING, AND PLASTERING**

**1741 MASONRY, STONE SETTING, AND OTHER STONE WORK**

**1742 PLASTERING, DRYWALL, ACOUSTICAL, AND INSULATION WORK**

**1743 TERRAZZO, TILE, MARBLE, AND MOSAIC WORK**

**175 CARPENTRY AND FLOOR WORK**

**1751 CARPENTRY WORK**

**1752 FLOOR LAYING AND OTHER FLOOR WORK, NOT ELSEWHERE CLASSIFIED**

**176 ROOFING, SIDING, AND SHEET METAL WORK**

**1761 ROOFING, SIDING, AND SHEET METAL WORK**

**177 CONCRETE WORK**

**1771 CONCRETE WORK**

**178 WATER WELL DRILLING**

**1781 WATER WELL DRILLING**

**179 MISCELLANEOUS SPECIAL TRADE CONTRACTORS**

**1791 STRUCTURAL STEEL ERECTION**

**1793 GLASS AND GLAZING WORK**

**1793 GLASS INSTALLATION, EXCEPT AUTOMOTIVE-CONTRACTORS**

**1794 EXCAVATION WORK**

**1795 WRECKING AND DEMOLITION WORK**

**1796 INSTALLATION OR ERECTION OF BUILDING EQUIPMENT, NOT ELSEWHERE CLA**

**1799 SPECIAL TRADE CONTRACTORS, NOT ELSEWHERE CLASSIFIED**