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The Effects of the Great Recession on the Unemployment Rates of Minorities in the United States

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Abstract

While it is evident that the recession has affected a diversity of people in different ways of life, there is a unique connection between industries and ethnic groups. "Many of the demographic groups that exhibit larger cyclical variation such as those with lower education, minorities, and males, are more likely to be employed in the industries with greater exposure to cycles (Hoynes et. al, 2012). Construction and manufacturing have experienced the largest declines in employment rate of the post-WWII era, with a 13.7 percent decline in construction employment and a 10.0 percent decline in manufacturing employment (BLS, February 2012). Despite government programs to level the playing field such as affirmative action laws and other aid that is available to those seeking employment, there is a continuous disparity among different ethnic groups. With regard to "The Great Recession," there is a disparity among the unemployment rates of Hispanics and other ethnic groups. This paper intends to explain why there is a disparity. Specifically, it addresses reasons that the unemployment rates of Hispanics are more adversely affected by the Great Recession when compared to the unemployment rates of other minority groups. Also, did concentrations of Hispanics in adversely affected industries contribute to higher unemployment levels during the Great Recession?

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Jarrood Hill

I. INTRODUCTION

As America continues to “reel” from the effects of the recession, unemployment rates continue to be a pertinent topic among politicians and the media. The seasonally adjusted unemployment rate increased from five percent in 2007 to 9.5 percent in 2009 (Hoynes et. Al, 2012). Minorities are affected by the recession more than are whites. Specifically, Hispanics have suffered greatly as a result of the recession. “The recession has hit Hispanic employment relatively hard, resulting in employment that is 9.5 percent lower than it would have been if the recession had not occurred” (Engemann & Wall, 2010).

Similarly, certain industries have also been more adversely impacted by the recession. Most notably, blue-collar industries, such as manufacturing and construction, have been affected by the recession disproportionately comparing to other industries, such as education. The employment rate fell by 27 percent from the start of the recession in 2007 in the residential construction industry. Likewise, there was a 14.8 percent decrease in employment during the recession in the nonresidential construction industry (Hadi, 2011). Although the employment rate declined the most in industries such as construction, more resilient industries such as hospitality and retail trade also experienced decreases in employment (Goodman & Mance, 2011).

While it is evident that the recession has affected a diversity of people in different ways of life, there is a unique connection between industries and ethnic groups. “Many of the demographic groups that exhibit larger cyclical variation such as those with lower education, minorities, and males, are more likely to be employed in the industries with greater exposure to cycles (Hoynes et. al, 2012). Construction and manufacturing have experienced the largest declines in employment rate of the post-WWII era, with a 13.7 percent decline in construction employment and a 10.0

percent decline in manufacturing employment (BLS, February 2012). Despite government programs to level the playing field such as affirmative action laws and other aid that is available to those seeking employment, there is a continuous disparity among different ethnic groups. With regard to “The Great Recession,” there is a disparity among the unemployment rates of Hispanics and other ethnic groups. This paper intends to explain why there is a disparity. Specifically, it addresses reasons that the unemployment rates of Hispanics are more adversely affected by the Great Recession when compared to the unemployment rates of other minority groups. Also, did concentrations of Hispanics in adversely affected industries contribute to higher unemployment levels during the Great Recession?

II. THEORY

The theoretical framework of this paper is based on two economic theories: the human capital theory and the occupational segregation theory. In regard to the former, human capital is the productive capabilities that one possesses to generate income within an economy (Rosen, 2008). An individual with higher levels of human capital is less likely to be unemployed and more likely to be employed because of their productive capabilities. Furthermore, greater levels of human capital will allow individuals to be in corresponding industries that require higher levels of productivity. As a result, individuals with higher levels of human capital tend to be in industries that are less cyclical in nature and will suffer less during recessions.

As for human capital theory, the occupational segregation theory is also relevant to this research. According to Gordon Marshall (1998), sociologist and former chief executive of the Economic Social and Research Council, occupational segregation refers to labor being divided in such a way that groups of people are channeled into specific types of occupations with specific roles and tasks. Based on other studies such

as Catherine Hakim's Key Issues in Women's Work: Female Heterogeneity and the Polarisation of Women's Employment (1996), Marshall links "channeling" or occupation segregation to discrimination. It is commonly explained as a consequence of discrimination (Marshall, 1998). This "segregation" can take place among men and women or among different ethnic groups. For this research, the definition will be in reference to the latter. Specifically, Hispanics are being "sorted" into certain industries such as construction that were more adversely affected by the recession and in effect, are hurt more than other individuals in this sector and those that are not in this sector. This "sorting" may be due to human capital factors or lack thereof. Conversely, it could be due to discrimination. The means of sorting may be different, but the result is the same.

These two theories work together to suggest why Hispanics in the labor market are at a disadvantage relative to other groups. Lower levels of human capital yield difficulties in finding work for Hispanics. Moreover, jobs that are successfully obtained by Hispanics tend to be in blue-collar industries.

In the research, there are three main hypotheses that flow from the theoretical framework:

1. High unemployment rates among Hispanics are due to low levels of human capital;
2. Individuals with lower levels of human capital are less likely to be employed in "white collar" industries and thus, are more likely to be employed in "blue collar" industries;
3. Hispanics are being channeled into "blue collar" industries, which were hit harder by the recession and thus, suffer more adverse consequences than those who are not in blue-collar industries.

III. LITERATURE REVIEW

As "The Great Recession" has wreaked havoc in the lives of many Americans, particularly Hispanics, much has been documented about the effects it has had and is still having on the nation as a whole. With regard to unemployment rates in general, African Americans and Hispanics have historically had higher unemployment rates than Whites (Bureau of Labor Statistics, February 2012). Table 1 shows the unemployment rates of four different racial groups.

According to the Bureau of Labor Statistics, Hispanics and African Americans have been most adversely affected by the recession. Although African

Americans have the highest unemployment rate after the recession at 16 percent, Hispanics have seen the biggest change in their unemployment rates with an increase of 7.3 percentage points between 2006 and 2010. African Americans are a close second with a change of 7.1 percentage points. Whites and Asians have been less adversely affected with differences of 4.7 and 4.5 percentage points respectively.

When compared to past recessions, greater declines in employment were experienced during "The Great Recession" than any other recession in history (BLS, February 2012). The Great Recession caused a 7.9 percent decrease in employment, which is an even greater decline than experienced during the recession between 1981 and 1982 when there was a 6.0 percent total change in employment (Engemann & Wall, 2010). "Despite recent improvements, the labor market continues to struggle from the aftermath of a historic employment downturn" (Goodman & Mance, 2011).

The literature points to specific industries that have been hit more than others by the recession and, as a result, these are some of the industries that continue to suffer even after the recession has officially ended. According to Goodman and Mance (2011), manufacturing employment fell 14.6 percent, from 2007 to 2009. Also, the automobile industry's employment fell 35 percent during the recession. Similarly, construction employment fell by 19.8 percent during the recession, seeing the most devastating depths in employment since March 1998 (Hadi, 2011).

Working in these industries, there is a disproportionate amount of Hispanic workers compared to other minority and ethnic groups. According to the Bureau of Labor Statistics, 11 percent of all Hispanics are in the construction industry (September 2012). Comparatively, 3.3 percent of African Americans and 7.2 percent of whites are in the construction industry. Similarly, the leisure and hospitality industry as well as the manufacturing industry employ a higher percentage of Hispanics at 13 percent and 11 percent, respectively. Table 2 shows the percentage of each race in a given industry for 2011.

The coalescence of the recession, race, and industry has been evident in other studies, especially during economic downturns. According to Gregory Defreitas (1985), the single most important factor is the above-average elasticity of Hispanics' employment with respect to variations in aggregate demand. In

other words, because Hispanics are employed in industries that are based on the demand of consumers or the cyclical nature of the economy, they bear “harsher” consequences from recessions and are in effect, more adversely affected. Conversely, other studies approach the effect of the recession on Hispanics in terms of human capital factors. For instance, a study conducted by Boisjoly and Duncan (1994) concluded that lower levels of education accounted for the difference in employment numbers between Hispanics, other minorities, and whites.

From the literature, one can make the conclusion that human capital factors such as educational attainment and occupational segregation across industries are pertinent in explaining why Hispanics were adversely affected by the Great Recession. However, this paper will contribute to the literature by focusing on the effects of the Great Recession on Hispanics rather than comparing recessions or looking at less severe recessions.

IV. DATA & EMPIRICAL MODEL

The data is collected from the American Community Survey that is distributed by IPUMS-USA at the University of Minnesota. This database is chosen because of the large sample size and the variables that are accounted for in this survey. Specifically, the years 2006 and 2010 are chosen to account for the boom year, 2006, when unemployment levels were low, and the recession year, 2010, when unemployment levels were persistently high. Although people of all ages are included in the sample with over 6 million cases, only “working age” individuals are considered in this research. Similarly, individuals in the work force and out of the work force are included in the sample, but only individuals in the work force are considered.

Descriptive statistics will be used to compare unemployment rates before and after the recession. Change in the percentage points of unemployment rates before and after the recession will be used to measure the effects of the recession. Specifically, change in the percentage points of unemployment rates by race and industry will be analyzed. In connection with my hypotheses, there will be a greater change in the unemployment rate before and after the recession among Hispanic workers in blue collar industries such as construction and manufacturing.

When considering the effects of the recession, three regressions will be used to account for various

factors such as human capital, age, and gender. Specifically, unemployment will be the dependent variable. Model 1 will account for race and the recession year. Therefore, the regression will be as follows:

$$\text{Unemployment} = \beta_0 + \beta_1(\text{Race}) + \beta_3(\text{Rec Yr})$$

Next, model 2 will be ran to account for human capital factors such as age, language, years in the United States, educational attainment, and gender. Model 2 is as follows:

$$\begin{aligned} \text{Unemployment} = & \beta_0 + \beta_1(\text{Race}) + \beta_2(\text{Rec Yr}) + \\ & \beta_3(\text{Language}) + \beta_4(\text{Age}) + \beta_5(\text{Yrs. in the U.S.}) \\ & + \beta_6(\text{Gender}) + \beta_7(\text{Ed}^n) \end{aligned}$$

Lastly, model 3 will take industry into consideration. Hence, model 3 is as follows:

$$\begin{aligned} \text{Unemployment} = & \beta_0 + \beta_1(\text{Race}) + \beta_2(\text{Ed}^n) + \beta_3(\text{Yrs. in} \\ & \text{the U.S.}) + \beta_4(\text{Language}) + \beta_5(\text{Rec Yr}) + \beta_6(\text{Age}) + \beta_7 \\ & (\text{Gender}) + \beta_8(\text{Industry}) \end{aligned}$$

In models 2 and 3, language, gender, unemployment, age, and industry are all dummy variables. This model will account for both human capital issues and occupational issues in regard to the theoretical framework of this paper.

The groups included in this research are defined as follows:

- Asians (NonHispanAsian)
- African Americans (Black)
- Other minorities (NonHispanOther)
- Hispanics (Hispanic)
- Whites (NonHispanwhite)
- Non-Hispanic Blacks (NonHispBlack)

These groups are all dummy variables with the value of 0 or 1.

Educational attainment was also considered and is defined as follows:

- High school diploma (HSdiploma)
- Some college (Somecollege)
- Bachelor's degree (Bachelorsdegree)
- Masters + (Masterplus)

Likewise, these variables are dummy variables with a value of 0 or 1.

People of all ages are included in the sample; however, because people usually do not begin to work

until their teen years, age in this research will be split into five groups:

- Young people (16-26)
- Mid twenties & thirties (27-36)
- Mid thirties & forties (37-46)
- Mid forties & fifties (47-56)
- Mid fifties & sixties (57-66)

With regard to industry, the industries included in this research are as follows: agriculture, mining, construction, retail trade, transportation and warehousing, utilities, information and communications, finance, professional services, education/health and social services, the arts, public administration, and other services. All these industries are dummy variables, possessing a value of 1 if employed in the given industry and 0 if one is not in the given industry.

Language is an important variable in this research as well. It is a dummy variable having a value of 0 if English is not the primary language spoken and 1 if English is the primary language spoken.

It is hypothesized that the following variables will have positive signs: Hispanic, language, recession year, age, and gender. In agreement with the literature, males will have higher unemployment rates than females. Education will have a negative sign, decreasing unemployment as more education is attained. Years in the United States will also have a negative sign, decreasing unemployment as the number of years in the United States increases.

The industry variable will have a positive sign if it is an industry that was more adversely impacted by the recession. This means that the given industry will add percentage points to unemployment rates. Conversely, the industry variable will possess a negative sign if the given industry is less adversely impacted by the recession. Hence, percentage points will be deducted from the unemployment rates of individuals within the given industry.

V. RESULTS

In conjunction with the hypotheses of this paper, Hispanics are in fact channeled into certain industries. Moreover, Hispanics are concentrated in industries that are more adversely impacted by the recession. Table 3 shows the percentage of all employed individuals of a given race within an industry. In 2006, 8.3 percent of all employed Hispanics were in the retail trade industry. This figure increases to 10 percent in 2010, the highest

of any race in 2010. Similarly, 6.9 percent of all employed Hispanics were in the construction industry in 2006; 6.5 percent of all employed Hispanics were in the construction industry in 2010. In 2010, whites, blacks, other minorities, and blacks enjoyed lower percentages in this industry at 4 percent, 2.8 percent, 4 percent, and 4.1 percent, respectively.

Similarly, Hispanics are more concentrated in the arts and entertainment industry. Before the recession, 7 percent of all employed Hispanics were in the arts and entertainment industry. This figure increased to 8.6 percent after the recession. In comparison, only 5.5 percent and 5.7 percent of all employed whites were in the arts and entertainment industry in 2006 and 2010, respectively. Likewise, only 5.4 percent of all employed Asians were in the arts and entertainment industry in 2006, increasing minutely to 5.5 percent in 2010.

With regard to Hispanics, approximately two-fifths of all Hispanics are in industries that were heavily impacted by the recession. However, some are in the professional services industry, a “white-collar” industry. This finding is in opposition to my hypotheses. Furthermore, it shows that some Hispanics are in “white-collar” industries; nonetheless, it still speaks to the testimony that Hispanics were in industries that were heavily impacted by the recession. Specifically, 7.1 percent of all employed Hispanics were in the professional services industry in 2010, the highest percentage among the included groups.

In concurrence with the aforementioned descriptive statistics, the regression results for models 1, 2, and 3 each present results that are in agreement with the three hypotheses of this paper. Table 4 shows the coefficients for each regression model before and after the recession. The constant for Model 1 is .029 before the recession and .050 after the recession; i.e., without controlling for anything, there is an unemployment rate of 2.9 percent before the recession and 5 percent after the recession. Recall, Model 1 accounts for race and whether or not it was a recession year or not. In conjunction with the literature, blacks have the highest coefficient at .030 before and after the recession. Merely being black adds 3 percentage points to the unemployment rate. Hispanics are second with .7 percentage points added to their unemployment rate. Asians and other minorities are impacted less when only accounting for race and the year.

In addition to race, Model 1 also accounts for

the year. In 2006, a boom year, the coefficient is negative. That is, one was less likely to be unemployed in 2006. Specifically, 2.1 percentage points could be deducted from unemployment rates on account of the year. Conversely, in 2010, a year after the recession officially ended, the coefficient carried a positive sign. This means that the year impacted unemployment rates in a negative manner. After the recession, 2.1 percentage points were added to unemployment rates.

Model 2 accounts for human capital and demographic factors in addition to the factors accounted for in Model 1. These additional variables include language, age, years in the United States, educational attainment, and gender. With the exception of years in the United States, these factors had a negative impact on unemployment rates, adding percentage points to unemployment rates.

Compared to older individuals, young people were more likely to be unemployed before and after the recession. In 2006 and 2010, 6.5 additional percentage points were added to the unemployment rates of young people. In relation to the human capital theory, as individuals increase their education, unemployment becomes less likely. In Table 4, Model 2, as more education is obtained, the sign changes from positive to negative. Both before and after the recession, individuals with some college are still impacted negatively with .9 percentage points being added to their unemployment rates. However, individuals with a bachelors or masters degree decrease their unemployment rates by 1.1 and .7 percentage points, respectively.

With regard to gender and in conjunction with the literature, males are more adversely impacted by the recession when compared to women. Men have an additional .9 percentage points added to their unemployment rate.

The language variable also possessed a positive sign. When compared to individuals who do not speak English, those who do speak English suffer higher levels of unemployment. A substantial 1.1 percentage points are added to the unemployment rates of those who speak English.

Surprisingly, years in the United States do not add or subtract percentage points from unemployment rates. Although it is statistically significant at the .000 level, it is insignificant in regard to unemployment rates. This could be due to how years in the United States

were measured. Unlike the other variables, years in the United States are an absolute variable, not a dummy variable. Nonetheless, years in the United States are not an important variable in this research.

Finally, Model 3 considers industry as well as the aforementioned variables accounted for in models 1 and 2. By way of this model and the descriptive statistics presented in Table 3, my hypothesis that Hispanics are concentrated in blue-collar industries that were hit harder by the recession and thus, are more adversely impacted by the recession is proven. In 2006, being in the construction industry added 3.6 percentage points to unemployment rates. In 2010, this figure ballooned to 11.8. That is, 11.8 percentage points were added to the unemployment rates of those in the construction industry.

Recall, in 2006, 6.9 percent of all employed Hispanics were employed in the construction industry. Although this figure decreased by .4 percentage points to 6.5 percent, there was still a higher concentration of Hispanics in the construction industry and hence, their concentration within this industry contributed to their high unemployment rates.

Similarly, the manufacturing industry shared a similar story. In 2006, being in the manufacturing industry added 2 percentage points to their unemployment rates. In 2010, this figure increased to 6.2 percent. The retail trade and arts/entertainment industries also saw increases before and after the recession in relation to unemployment. In 2006, 2 and 5.3 percentage points were added to the unemployment rates of those in the retail trade and arts/entertainment industries, respectively. In 2010, these figures increased to 4.6 and 5.3 percent.

In contrast to the hypotheses of this paper, the professional services industry, a white-collar industry, was an adversely impacted industry in which Hispanics were employed. Like the other four industries mentioned, there was an increase in the coefficient for this industry before and after the recession. Before the recession, this industry added 2.8 percentage points to the unemployment rates of those within the industry. In 2010, this figure jumped to 5.9 percent.

Although this industry is a white collar industry, notice the percentage of Hispanics in this industry. According to Table 3, 5.8 percent of all employed Hispanics were in the professional services industry

in 2006, compared to 6.3 percent of all employed whites, Asians, and other minorities, and 6.2 percent of all employed blacks. Perhaps the difference between Hispanics and everyone else is educational attainment. Normally, this industry requires higher levels of education. In connection with one of my hypothesis, this shows that low levels of educational attainment does contribute to the high unemployment rates of Hispanics. In 2010, Hispanics led all other racial groups with 7.1 percent of all employed Hispanics being in the professional services industry.

VI. CONCLUSIONS

By way of this research, there are many conclusions that can be made. For instance, as levels of human capital increase, an individual is less likely to be unemployed. In connection with one of the hypotheses, individuals with less human capital are more likely to be unemployed and are thus, less likely to be in "white collar" industries. Low levels of human capital are a factor that is affecting Hispanics employment or lack thereof.

Also, the descriptive statistics used in Table 3 show that there are high concentrations of Hispanics in industries that were more adversely affected by the recession. The regression results show that some of these industries that Hispanics were highly concentrated experienced high levels of unemployment after the recession. Specifically, cyclical industries like construction, manufacturing, retail trade, and the arts contained high concentrations of Hispanics and were hit harder by the recession compared to other industries. Also, the professional services industry, a white-collar industry, was adversely impacted. Hence, Hispanics were channeled into industries that were hit hard by the recession and consequently, suffered more adversely compared to other minorities and whites.

VII. POLICY IMPLICATIONS/ FUTURE RESEARCH

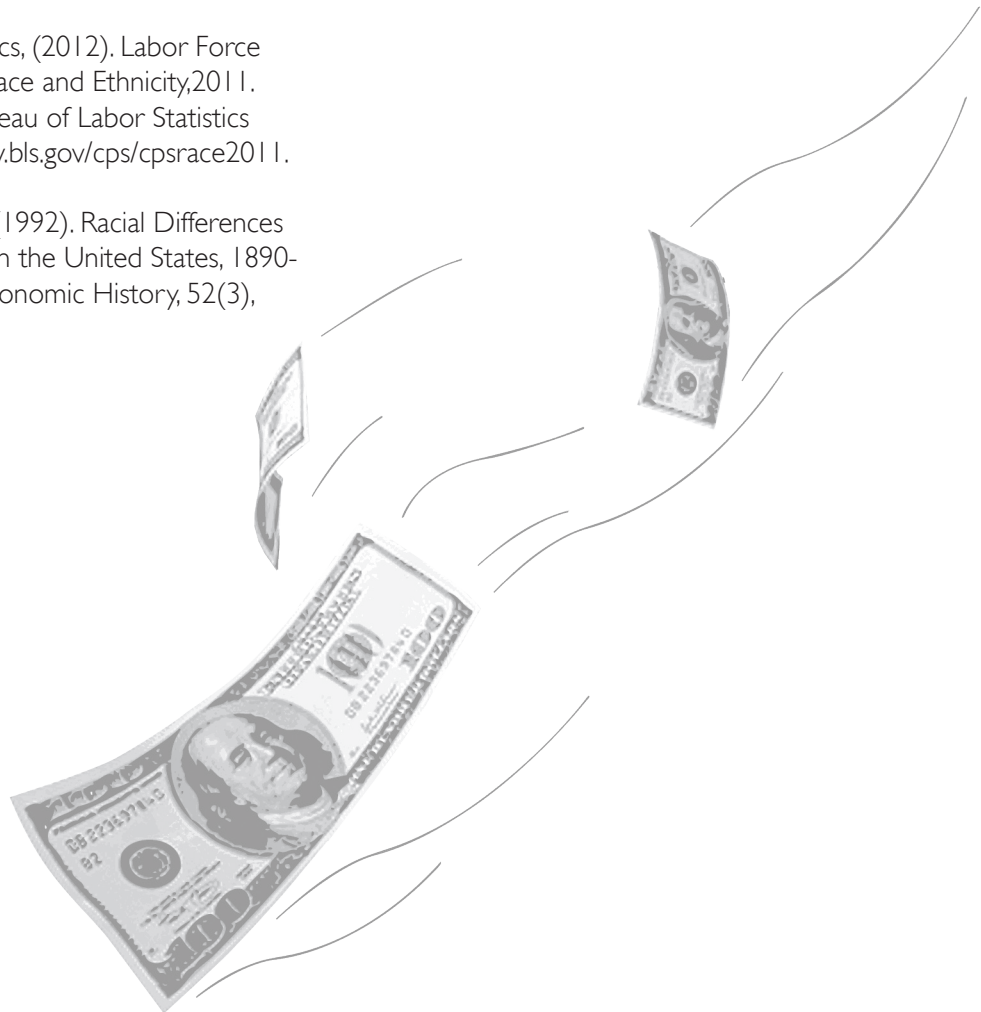
There are serious policy implications that flow directly from this research. It is evident that there are high concentrations of Hispanics in particular industries, some of which experience high levels of unemployment. Work needs to be done to increase human capital levels among Hispanics. Work programs that allow individuals to increase their educational attainment and work simultaneously need to be made more readily available to Hispanics. Also, colleges and universities need to continue to seek talent from all demographic groups, in an effort to give everyone in America an equal opportunity to succeed.

Future research could focus more on immigrants. Specifically, are Hispanic immigrants more adversely affected by recessions than Hispanic natives? Also, do the same factors affect the unemployment rates of Hispanic natives and Hispanic immigrants? Lastly, is there a factor that has a greater net effect on the unemployment rates of Hispanic immigrants and Hispanic natives before and after the recession? These types of questions should be considered in the future to better understand why these Hispanics suffer more during and after recessions.

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IX.APPENDIX

Table 1: Descriptive statistics: Average Unemployment Rates Before and After the Recession				
Year	Whites	African American	Asians	Hispanics
2006	4%	8.9%	3%	5.2%
2010	8.7%	16%	7.5%	12.5%

Table 2: Descriptive Statistics for Industry Employment in 2011			
Industry	African Americans	Hispanics	Whites
Construction	3.3%	11%	7.2%
Ed'n and Health Services	22.8%	17%	22%
Wholesale and Retail Trade	13.3%	15%	14.3%
Leisure and Hospitality	9.5%	13%	8.8%
Professional & Business Services	9.1%	12%	11.5%
Manufacturing	8.3%	11%	10.4%

Table 3: Descriptive statistics: Distribution of Employed Individuals by Race & Industry										
Industry	Whites		Blacks		Other Minorities		Asians		Hispanics	
	2006	2010	2006	2010	2006	2010	2006	2010	2006	2010
Construction	4.5%	4%	3.1%	2.8%	4.4%	4%	4.6%	4.1%	6.9%	6.5%
Manufacturing	8%	6.9%	7.3%	6.6%	8%	6.9%	8%	6.8%	7.9%	7.2%
Retail Trade	8.9%	9.2%	8.3%	9.4%	8.9%	9.2%	9%	9.2%	8.3%	10%
Arts/ Entertainment	5.5%	5.7%	6.7%	7.5%	5.4%	5.7%	5.4%	5.5%	7%	8.6%
Professional Services	6.3%	6.7%	6.2%	7%	6.3%	6.7%	6.3%	6.5%	5.8%	7.1%
All other industris	66.8%	67.5%	68.4%	66.7%	67%	67.5%	66.7%	67.9%	64.1%	60.6%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table 4: Regression results for Model 1, Model 2, and Model 3						
Variables	Model 1		Model 2		Model 3	
	Before Rec	After Rec	Before Rec	After Rec	Before Rec	After Rec
Constant	.050	.029	.028	.007	.031	.014
	(32.674)	(18.990)	(17.954)	(4.323)	(20.032)	(9.412)
Hispanic	.007	.007	.007	.007	.006	.005
	(4.561)	(4.561)	(4.582)	(4.582)	(4.027)	(3.296)
Black	.030	.030	.028	.028	.028	.030
	(116.452)	(116.452)	(107.320)	(107.320)	(110.481)	(117.247)

NonHispan Asian	.000***	.000***	-.002	-.002	-.002	-.002
	(1.039)	(1.039)	(-4.518)	(-4.518)	(-4.248)	(-5.262)
NonHispan Other	-.005***	-.005***	-.004***	-.004***	-.004***	-.004***
	(-3.271)	(-3.271)	(-2.411)	(-2.411)	(-2.621)	(-2.528)
LanguageEng			.011	.011	.010	.008
			(43.425)	(43.425)	(38.859)	(32.137)
Youngppl			.065	.065	.061	.060
			(275.803)	(275.803)	(257.818)	(256.581)
Yrs. In the US			.000	.000	.000	.000
			(39.264)	(39.264)	(34.909)	(27.343)
Somecollege			.009	.009	.007	.005
			(45.258)	(45.258)	(36.672)	(23.301)
Bachelors degree			-.011	-.011	-.010	-.009
			(-37.949)	(-37.949)	(-36.508)	(-33.283)
Mastersplus			-.007	-.007	.006	-.004
			(-18.345)	(-18.345)	(-15.628)	(-9.744)
Male			.009	.009	.007	.003
			(55.876)	(55.876)	(43.012)	(16.721)
afterrec		.021		.021		.002
		(131.864)		(132.350)		(13.601)
beforeerec	-.021		-.021		-.029	
	(-131.864)		(-132.350)		(-165.419)	
Construction					.036	.118
					(63.717)	(202.048)
Manufacturing					.020	.062
					(45.977)	(134.249)
Retail Trade					.020	.046
					(47.953)	(112.299)
ArtsEnter-tainmentetc					.034	.053
					(65.451)	(105.498)
Professional serv					.024	.059
					(58.142)	(125.656)