2010

Labor Market Outcomes for Middle Eastern Immigrants in the Aftermath of the September 11th Attacks

Mujtaba A. Isani
Illinois Wesleyan University, misani@iwu.edu

Labor Market Outcomes for Middle Eastern Immigrants in the Aftermath of the September 11th Attacks

Mujtaba Isani '10

Advisor: Dr. Michael Seeborg

Abstract

Media reports all over the USA reported that a wave of Islamophobia had gripped the USA after the September 11, 2001 attacks. It seemed as though the American population were blaming not the radicals but the Middle Easterners and the Muslims in general for the inhumane act. Some reports even suggested a new sort of McCarthyism in the USA but this time against the Middle Eastern populace. This paper investigates whether such discrimination transformed itself in the US labor market by conducting an econometric analysis, taking Becker's taste for discrimination theory as its theoretical basis. It first analyzes whether there was a significant change in wage differentials between Middle Eastern population groups compared to native Americans pre and post 2001. Secondly, it accomplishes a regional analysis to see whether the populations from certain Middle Eastern regions were discriminated more than other regions. Lastly, the paper examines other labor market outcomes such as labor force participation rates and unemployment rates, to determine whether discrimination was present in other avenues and to provide an all encompassing picture of Middle Eastern immigrants in the US labor market before and after the attack of September 11th.

Introduction:

"In the aftermath of September 11th, there has been heightened interest in the Middle Eastern immigrant population living in the United States. Their integration and incorporation into American society has come to be seen as increasingly important" (Camarota, 2002). Media reports all over the USA reported that a wave of Islamophobia had gripped the USA after the September 11, 2001 attacks. It seemed as though the American population were blaming not the radicals but the Middle Easterners and the Muslims in general for the inhumane act. Some reports even suggested a new sort of McCarthyism in the USA but this time against the Middle Eastern populace. This study investigates whether such discrimination transformed itself in the US labor market.

The Center for Immigration Studies, an independent think tank, claims that before September 11th there was little evidence of discrimination against Middle Eastern immigrants in the job market. They report median earnings for Middle Eastern men in 2000 to be $39,000, slightly higher than the $38,000, the average for native workers. For their findings they used census data from the year 2000, and defined a Middle Eastern immigrant as one living in the United States but having been born in the Middle East (Camarota, 2002). The definition, hence, included those Middle Eastern men who were US citizens but were born in the Middle East.

Little or no research has been conducted on the labor market outcomes of Middle Eastern immigrants after the attack of September 11th. It is interesting to know what has happened to the earnings, employment and supply of Middle Eastern immigrants in the US labor market after September 11th and whether one sees in it an element of discrimination.

It is also important to focus on the labor market outcomes of Middle Eastern immigrants who are not US citizens, as they are more likely to bear the brunt of discrimination in the labor market.

This paper examines whether the wages of Middle Eastern immigrants were significantly affected because of the attacks of September 11th. The empirical model divides the Middle East into different regions, as the Middle East includes a diverse array of countries and putting it into one lump might not portray the correct picture. The paper also aims to look at the labor force participation rates and unemployment rates of Middle East immigrants to see if discrimination took supplementary forms other than wage discrimination. This helps determine whether the change in supply of Middle Eastern immigrants in the labor force offsets a change in the demand for Middle Eastern immigrants. In all, this paper hypothesizes that Middle Eastern immigrants have worse labor market outcomes in the aftermath of the September 11th attacks because of discrimination in the labor market.

Theory and Review of the Literature:

My paper uses Becker's taste for discrimination model and the human capital theory as its theoretical basis. The analysis only includes Middle Eastern men because Middle Eastern "females are more likely to face cultural and social barriers in the U.S. labor force" (Vernez, 1999). Therefore, if Middle Eastern females are included, this leads to an unfair comparison with native born American citizens, because of the vast cultural differences.

Becker's taste model (Becker, 1957) suggests that employers, workers, or customers may have a taste for discrimination. Such a "taste" refers to preference in favor of or against hiring, working with, or buying from a particular group, such as minorities (England, 1994). It is believed that if one is willing to pay an extra amount of money for something, it indicates that one has a taste for it. Thus, a taste for discrimination implies that discriminators are willing to pay extra to hire a preferred group. An employer with a taste for discrimination against Middle Eastern immigrants is unwilling to hire Middle Eastern immigrants unless they offer themselves at a wage below the wage paid to natives.

A graphical analysis of the taste for discrimination model applies is shown below: The hypothesized model in equilibrium representing the situation before September 11th should look like Fig.1 (McConnell, 2006). It shows the labor market for Middle Eastern workers with the wage rate for them expressed as a ratio measuring Middle Eastern immigrant wages divided by the Native wages.

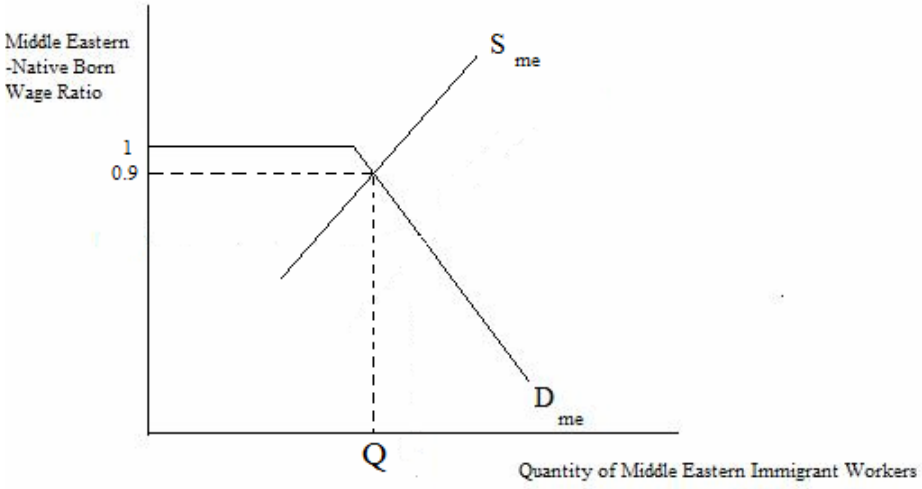

Fig. 1 Hypothesized situation before September 11th

Let's assume that before September 11th the ratio of wages paid to Middle Eastern immigrants to wages paid to native born workers is 9/10 or 0.9 as shown by the intersection of the demand and supply of Middle Eastern immigrant workers. The horizontal portion of the demand curve, where the ratio is 1, reflects non-discriminating employers. The downward sloping portion of the demand curve reflects discriminating employers and discrimination increases as we move down the segment.

If discrimination does take its toll on Middle Eastern immigrants after 9/11 then the hypothesized graph for the taste for discrimination model should look like Fig. 2:

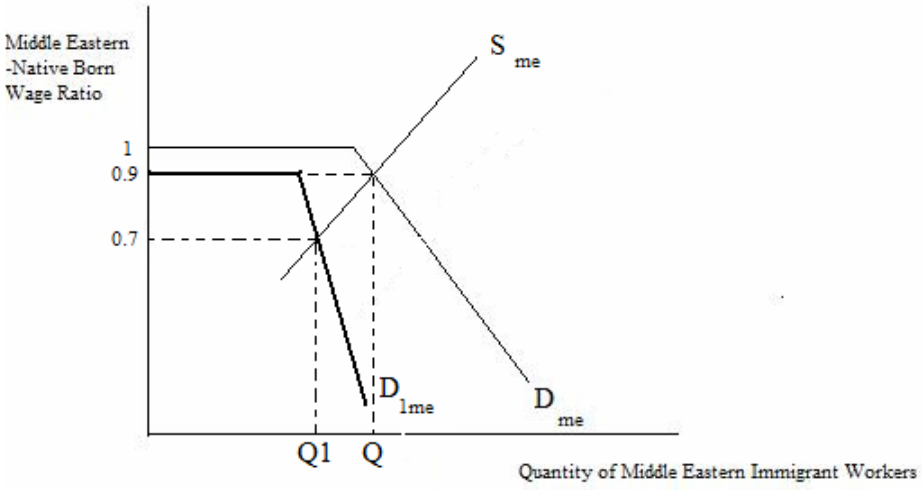

Fig. 2 Hypothesized graph for the situation after September 11

Here in Fig. 2, since the events of 9/11 might have caused an increase in the discrimination against Middle Eastern immigrants, the demand curve for Middle Eastern immigrants shifts from D_{me} to D_{1me}. The demand and supply curves for Middle Eastern

immigrants in the US labor market now intersect where the ratio of the wages of Middle Eastern immigrants to native born US citizens is 0.7.

Fig.3 shows the adjustment mechanism that takes place if the supply of Middle Eastern immigrants decreases as a result of events of September 11th. Supply adjustments are expected if there is discrimination for two reasons: first, some immigrants may leave the United States if they face a hostile labor market; second, some Middle Eastern immigrants may stay in the United States but withdraw from the labor force. This is referred to as the discouraged worker effect in the labor supply literature (McConnell, 2006).

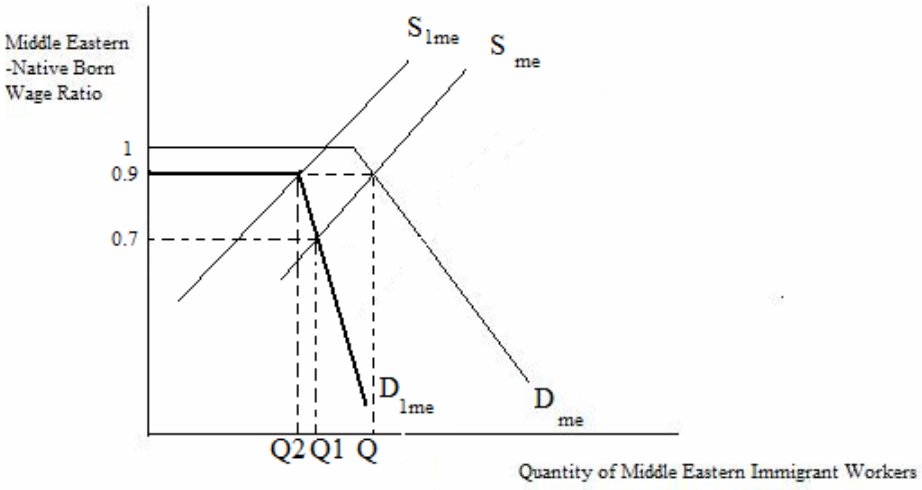

Fig. 3 Restoration of equilibrium caused by a decrease in supply of Middle Eastern Immigrants

In Fig. 3, we see that a decrease in supply of Middle Eastern immigrants in the US labor market has caused the demand and supply curves to intersect at the same ratio of

wages as was before September 11th. Although there was a decrease in demand because of discrimination it was offset by Middle Eastern immigrants leaving the US labor market.

Becker's (1957) theory provides a conceptual framework to investigate if the wages of Middle Eastern immigrants in relation to native born US citizens significantly changed in the aftermath of September 11th. My paper determines whether this change was offset by a change in supply of Middle Eastern immigrants in the US labor market.

Human Capital theory suggests some important control variables for my analysis. In the absence of wage discrimination, pay inequities are explained by differences in worker characteristics (Borjas, 2000). In this paper, worker characteristics include education and year of immigration.

Education has a significant impact on wage rate because it is a good measure of the skills a worker brings to the job. Earnings are expected to rise with education because of the productivity enhancing effects of education. Schooling allows one to gain a variety of skills and knowledge that are potentially useful on the job, such as reasoning ability, writing skills, time management, dependability etc. Furthermore, "education may act as a screening device for employers, allowing them to distinguish more productive applicants from less productive ones" (Blau, Ferber and Winkler, 2002).

Years since immigration is also a key determinant of immigrant wages. Those who arrive early obtain more skills that are directly related to the U.S. job market, and are therefore more productive in this country than later arrivals (Borjas, 1987). Human capital theory of assimilation claims that immigrant and native wages tend to converge over time (Borjas, 1999). An initial difference is caused by the fact that newly arrived immigrants are typically less productive, but as time passes, they acquire language proficiency, cultural

qualifications and other more general human capital qualifications, which should enable them to catch up to natives. Therefore, "it is important to disentangle the assimilation effect from what could be considered ethnic discrimination by including this variable in the study" (Nielsen et al., 2003).

"Immigrants from different regions not only arrive with distinct levels of human capital, skills and abilities, but also have different political and cultural backgrounds which probably affect the rate at which they advance in the U.S. economy" (Schoeni, McCarthy and Vernez, 1996). For the purposes of this study, I am dividing the Middle East as defined by Center of Immigration Studies, into three regions not only because of the massive difference in cultural and political backgrounds but also because the Arab speaking Middle Eastern countries are looked as primarily participating in the attacks of September 11th. My three groupings are: Arab speaking Middle Eastern countries, South Asian Middle Eastern countries and Non-Arab speaking Middle Eastern countries.

Data:

This paper uses the IPUMS-Current Population Surveys from 1999, 2000, 2002 and 2003 as a data source (IPUMS-CPS, 2009). The survey has been conducted for more than 50 years. The reason for selecting these years is to measure labor market performance for the two years prior and for the two years following the September 11th attacks. The Current Population Survey (CPS) interviewed the following number of persons and Middle Eastern male immigrants in 1999, 2000, 2002 & 2003:

Table 1: Annual Survey Count for the IPUMS-CPS

YEAR	PERSONS	Middle Eastern Male Immigrants
1999	132,324	83
2000	133,710	95
2002	217,219	150
2003	216,424	147

The CPS is the primary source of information on the labor force characteristics of the U.S. population. The sample is scientifically selected to represent the civilian non-institutional population.

In order to capture working-age people and account for school leaving and retirement, all analyses are restricted to males 25 to 60 years old. For this study, an immigrant is defined as a person who is born in a foreign country and is not a US citizen. Therefore, a Middle Eastern immigrant is defined as one who is born in the Middle East and is not a US citizen. The dependent variable is the natural log of wage per hour (LNHRWG), which is calculated as follows:

Ln{Inflation adjusted wage and Sslary income / (usual hours worked per week)(weeks worked in previous year)}

The logarithmic form allows a nonlinearity into the regression analysis (Woolridge, 2003), and is consistent with human capital theory. Also, it allows coefficients to be interpreted as the percent changes in earnings given a one unit change in the independent variable. All variables are defined in Table 2.

The key independent variables in my regression analysis include: educational attainment, year of immigration, whether one is a Middle Eastern immigrant, whether one is from of the rest of the immigrant population, whether one is from a specific region of the Middle East, the event of September 11th and the interactions of variables with the event of September 11th.

Educational attainment is studied using dichotomous dummies. Five groups have been formed:

1. No school or less than high school
2. High school graduate or some college
3. Associate degree or equivalent vocational education
4. Bachelor's degree
5. Masters degree and above

Each group is considered as a separate variable, with a value of 1 if the concerned individual falls into the group and a value of 0 otherwise. The first group is the omitted category.

Year of immigration is controlled for by using a dichotomous dummy variable with a value of 1 if an immigrant had arrived in the US after 1996 and a value of 0 given if an immigrant had arrived in the US before 1996. There are two problems with this approximation. First, assimilation in the host society may also depend on the exposure to the host culture in the home country. Secondly, data restrictions did not allow for a better proxy for controlling years since immigration other than using a dichotomous dummy variable.

Middle Eastern immigrant is determined through a dummy variable given a value of 1 if one is born in the Middle East and is not a US citizen and a value of 0 given if otherwise. The comparison is native born US citizens. The CPS allowed me to use the following countries as part of the Middle East:

1. Pakistan
2. Bangladesh
3. Afghanistan
4. Armenia
5. Iran
6. Iraq
7. Palestine
8. Jordan
9. Lebanon
10. Saudi Arabia
11. Syria
12. Turkey
13. Egypt
14. Morocco
15. Middle East Not Specified

Note: Israel was omitted as it is not considered to be responsible for the September 11th attacks

For my regional analysis the Middle East was further divided in to the following regions and countries:

Arab Speaking Middle Eastern Countries

1. Iraq
2. Palestine
3. Jordan
4. Lebanon
5. Saudi Arabia
6. Syria
7. Egypt
8. Morocco

Non-Arab Speaking Middle Eastern Countries

1. Turkey
2. Armenia
3. Iran

South Asian Middle Eastern Countries

1. Pakistan
2. Afghanistan
3. Bangladesh

When conducting the regional analysis, this paper also uses dummy variables for the remaining Middle Eastern immigrants, with a value of 1 given if one is not a US citizen

and born in another region of Middle East, other than the one under scrutiny, and a value of 0 if otherwise.

The variable for all other immigrants is a dummy variable that controls for being an immigrant who is a non-US citizen and is not from the Middle East. A value of one is assigned to immigrants of other nationalities while a value of zero is assigned to all other respondents. This variable when included in regressions with the Middle East immigrant variable generates coefficients that show the effect of being a non-Middle East immigrant in reference to natives.

The variable for the event of September 11th is a dichotomous dummy variable with a value of 1 given if the person was surveyed after 2001 and a value of 0 given if the person was surveyed before 2001.

The interaction variables would be products of the values of the variables. The interaction variables would show whether the intersection of variables had a significant impact on the natural log of the hourly wage rate. Each interaction is the product of the 9/11 event variable (Event) and another independent variable. A particularly important interaction variable is Event*ME. The coefficient to this variable indicates whether the event significantly affected the earnings of Middle Eastern immigrants in the two years after September 11th.

Table 2: Key Variables, Expected Signs and Definitions:

Variable	Description	Omitted/Comparison Group
Dependent Variable		
LnWage	Natural log of wage per hour	N/A
Independent Variables		
ME(-)	Born in the Middle East & Not a US citizen	Born in the United States, US citizen
Otherimmig (-)	Born in any other country except the United States or the Middle East	Born in the United States, US citizen
Yearm(-)	Arrived after 1996	Born in the United States or arrived in the United States before 1996
SouthAsia(-)	Born in the South Asia & Not a US citizen	Born in the United States, US citizen
Arabspeak(-)	Born in the Arab speaking Middle East & Not a US citizen	Born in the United States, US citizen
NonArabspeak(-)	Born in the non-Arab speaking Middle East & not a US citizen	Born in the United States, US citizen
Othermeimmig(-)	Born in the Middle Eastern region not under analysis & not a US citizen	Born in the United States, US citizen
Edu^(+)	Education as series of dichotomous dummy variables Hschool: High school graduate or some college Assocdeg: Associate degree or equivalent vocational education Bachelordegree: undergraduate degree Mastersandabove: masters degree or above	Less than high school or no school
Event(-)	Survey Year after 2001	Survey year before 2001
Event*ME(-)	Event*ME	Before 2001* Born in the United States, US citizen
Event*Yearm(-)	Event*Yearm	Before 2001* Born in the United States or arrived in the US before 1996
Event*Other(-)	Event*Other	Before 2001*Born in the United States
Event*Edu^(+)	Event*Edu^	Before 2001* Less than high school or no school

Empirical Model:

First, descriptives are run to compare the wage and salary income of Middle Eastern immigrants to native born US citizens and to all other immigrants. Second, a series of Ordinary Least Squares (OLS) regressions are run to check whether the September 11th had significantly affected the wages of Middle Eastern immigrants, and to carry out the Wald's test to check whether the regressions as a whole changed because of the event.

In carrying out the Wald's test, first an equation which is called the restricted model is run which controls for human capital variables but does not include the dummy variable for the event. Then, the dummy variable for the EVENT is introduced and is interacted with all the other independent variables in the restricted model. This is then called the unrestricted model. Next, an F-stat for the Wald's test is calculated by the formula given below and is compared to the critical value of the F-stat from the unrestricted model. The test shows whether the an event significant impact on the regression equation

$$F = \frac{(ESS_R - ESS_U)/(DF_R - DF_U)}{ESS_U / DF_U}$$

Where ESS refers to the Error Sum of Squares, DF refers to the Degrees of Freedom, and R and U, refer to the restricted and unrestricted model respectively.

My regressions will be formulated as below. Each regression is structurally identical except for the dummy variable that controls for the area of the Middle East being considered (eg. ME, Arabspeakme, etc.).

Set 1(includes dummy for all Middle Eastern male immigrants)

LnWages = $A + A_1$ ME + A_2 Otherimmig + A_3 Yearm + A_4 Edu^ (Regression 1.1 Restricted Model)

LnWages = $B + B_1$ ME + B_2 Otherimmig + B_3 Yearm+ B_4 Edu^ + B_5 Event + B_6 Event*ME + B_7 Event*Otherimmig + B_8 Event*Yearm + B_9 Event*Edu^ (Regression 1.2 Unrestricted Model)

Set 2 (includes dummy for Middle Eastern male immigrants from Arab speaking countries)

LnWages = $C + C_1$ Arabspeak + C_2 Otherimmig + C_3 Yearm + C_4 Edu^ + C_5 Othermeimmig (Regression 2.1 Restricted Model)

LnWages = $D + D_1$ Arabspeak + D_2 Otherimmig + D_3 Yearm+ D_4 Edu^ + D_5 Othermeimmig + D6 Event + D_7 EVENT*Arabspeak + D_8 EVENT*Otherimmig + D_9Event*Yearm + D_{10} Event*Edu^+ D_{11} Event*Othermeimmig (Regression 2.2 Unrestricted Model)

Set 3 (includes dummy for Middle Eastern male immigrants from non-Arab speaking countries)

LnWages = $E + E_1$ NonArabspeak + C_2 Otherimmig + C_3 Yearm + C_4 Edu^ + C_5 Othermeimmig (Regression 3.1 Restricted Model)

LnWages = $F + F_1$ NonArabspeakme + F_2 Otherimmig + F_3 Yearm+ F_4 Edu^ + F_5 Othermeimmig + F6 Event + F_7 Event*NonArabspeak + F_8 Event*Otherimmig + F_9Event*Yearm + F_{10} Event*Edu^+ F_{11} Event*Othermeimmig (Regression 3.2 Unrestricted Model)

Set 4 (includes dummy for South Asian Middle Eastern Immigrants)

LnWages = $G + G_1$ SouthAsia + G_2 Othermeimmig + G_3 Yearm + G_4 Edu^ + G_5 Othermeimmig (Regression 4.1 Restricted Model)

LnWages = $H + H_1$ SouthAsia + H_2 Otherimmig + H_3 Yearm+ H_4 Edu^ + H_5 Othermeimmig + H_6 Event + H_7 Event*SouthAsia + H_8 Event*Otherimmig + H_9Event*Yearm + H_{10} Event*Edu^+ H_{11} Event*Othermeimmig (Regression 4.2 Unrestricted Model)

Through the regression, the coefficients A_1, C_1, E_1 and G_1 help determine the wage inequality in being a Middle Eastern non-citizen from four Middle Eastern regions rather than being a native born American citizen. The coefficients that are interactions of the event and the Middle Eastern region that one belongs to, help determine whether the event had a significant impact on the wages. These are the coefficients B_6, D_7, F_7 and H_7. The Wald's test establishes whether the regression equations as whole changed as a result of the events of September 11th by comparing each of the restricted models to its unrestricted counterpart.

Finally, the paper analyzes the labor force participation rates and unemployment rates to check if discrimination took forms other than wage discrimination, for example, in the case of discriminatory hiring. Changes in labor force participation rates would indicate if a change in wages was offset by a change in supply of Middle Eastern immigrants in the US labor market. It is hypothesized that Middle Eastern immigrant unemployment rates will increase relative to natives after 9/11 and that Middle Eastern immigrants will experience a decline in labor force participation rates relative to natives after 9/11.

In general, it is hypothesized that labor market outcomes for Middle Eastern immigrants have worsened in the aftermath of the September 11th attacks.

Results:

In Table 3, the initial descriptive statistics show that Middle Eastern immigrants who are not US citizens earn less than US citizens. Interestingly, this is in contrast to the findings of the Center Immigration Studies, as their definition for Middle Eastern immigrants included those who were US citizens but were born in the Middle East. As far my hypothesis is concerned, one cannot say much after the initial descriptives because I

have yet to control for human capital variables that determine wage. Interestingly we see that in 2002, the gap in the wages for Middle Eastern and native born US citizens widened. This gap was reduced in 2003. Whether the change in the wages of Middle Eastern immigrants with respect to native born US citizens was statistically significant will be determined through the regression analysis.

Table 3: Mean Annual Wage & Salary Income

Year	**Mean Annual Wage & Salary Income Adjusted for CPI for Males ($)**		
	Middle Eastern immigrants	Native born US citizens	All other immigrants
1999	21650	32800	22150
2000	27850	33080	22450
2002	30400	39700	27500
2003	30750	35050	24350

In the results of the regression models in Tables 4, 5, 6 and 7, all regressions explain between 14-18% of the variation in LnWage. The coefficients should be interpreted as a percentage change in hourly wage rate given a one unit change in the independent variable.

Table 4 shows that Middle Eastern immigrants earn 10.2% less than native born US citizens in the restricted model. All other variables show their expected signs with education positively affecting one's wage, and later immigration and being of any other immigrant nationality negatively affecting one's wage. All other immigrants earn 20.2% less than native born US citizens, however much cannot be said about the group because it

includes all immigrant population groups, which includes Mexican immigrants, who do poorly in the labor market compared to European immigrants, who do relatively well in the US labor market. In Regression 1.2, the coefficient of the interaction between the event and being Middle Eastern is not significant, thus it does not support my hypothesis that the event caused a significant change in the wages of Middle Eastern immigrants. Furthermore, the result of the Wald test suggested that the event did not change the regression equation significantly.

Table 5 Regression 2.1 shows that Arab speaking Middle Eastern immigrants earn 19.2% less than native born US citizens. All other Middle Eastern immigrants earn 5.1% less than native born US citizens. However, Regression 2.2 shows that the event did not significantly alter the wage of Middle Eastern immigrants as shown by the interaction of the event and Arabspeak variable. The Wald test showed that the event did not affect the regression equation as a whole.

Table 6 and Table 7, show that the consequence of being a Middle Eastern immigrant for a non-Arab speaking country or from a South Asian Middle Eastern country does not affect wages significantly. The interaction terms also depicted that the event did not affect the wages of the South Asian or the non-Arab speaking Middle Eastern immigrants. And, again the Wald test comparing the restricted and the unrestricted model was statistically insignificant.

Table 4: Regression Set 1 Results For All Middle Eastern Immigrants

Variables	Regression 1.1	Regression 1.2
Constant	2.386***	2.310***
	(430.729)	(268.798)
ME	-.102**	-.076
	(-2.794)	(-1.290)
Otherimmig	-.203***	-.222***
	(-28.805)	(-20.945)
Yearm	-.112***	-.152***
	(-10.002)	(-7.219)
Hschool	.278***	.263***
	(46.956)	(28.551)
Assocdeg	.446***	.420***
	(54.492)	(32.220)
Bachelordegree	.714***	.671***
	(106.261)	(62.280)
Mastersandabove	1.005***	.965***
	(130.000)	(78.206)
Event		-.130***
		(11.590)
Event*ME		.038
		(-.513)
Event*Otherimmig		.050***
		(3.510)
Event*Yearm		.001
		(.021)
Event*Hschool		.020
		(1.642)
Event*Assocdeg		.034*
		(2.011)
Event*Bachelordeg		.061***
		(4.432)
Event*Mastersandabove		.054**
		(3.443)
Dependent Variable: lnwage	R-squared: 0.163	R-squared: 0.174

Wald Test F-stat: 0.202

NOTES:
* Significant at the .1 level
** Significant at the 05 level
*** Significant at the .01 level

Table 5: Regression Set 2 Results Middle Eastern Immigrants From Arab Speaking Countries

Variables	Regression 2.1	Regression 2.2
Constant	2.386***	2.310***
	(430.736)	(268.798)
Arabme	-.192***	-.076
	(-3.186)	(-1.290)
Otherimmig	-.203***	-.222***
	(-28.821)	(-20.945)
Yearm	-.112***	-.152***
	(-9.971)	(-7.219)
Hschool	.278***	.263***
	(46.945)	(28.551)
Assocdeg	.446***	.420***
	(54.487)	(32.220)
Bachelordegree	.714***	.671***
	(106.252)	(62.280)
Mastersandabove	1.005***	.965***
	(129.982)	(78.206)
Othermeimmig	-.051	-.003
	(-1.125)	(.036)
Event		-.130***
		(11.590)
Event*Arabspeak		-.011
		(-.092)
Event*Otherimmig		.050***
		(3.510)
Event.Yearm		.001
		(.021)
Event*Hschool		.020
		(1.642)
Event*Assocdeg		.034*
		(2.011)
Event*Bachelordegree		.061***
		(4.432)
Event*Mastersandabove		.054**
		(3.443)
Event.Othermeimmig		-.090
		(.357)
Dependent Variable: lnwage	R-squared: 0.163	R-squared: 0.174
Wald Test F-stat: 0.014		

NOTES:
* Significant at the .1 level
** Significant at the 05 level
*** Significant at the .01 level

Table 6: Regression Set 3 Results Middle Eastern Immigrants From Non-Arab Speaking Countries

Variables	Regression 2.1	Regression 2.2
Constant	2.386***	2.310***
	(430.736)	(268.798)
NonArabspeak	.005	.126
	(.075)	(1.171)
Otherimmig	-.203***	-.222***
	(-28.821)	(-20.945)
Yearm	-.112***	-.152***
	(-9.971)	(-7.219)
Hschool	.278***	.263***
	(46.945)	(28.551)
Assocdeg	.446***	.420***
	(54.487)	(32.220)
Bach	.714***	.671***
	(106.252)	(62.280)
Mastersandabove	1.005***	.965***
	(129.982)	(78.206)
Othermeimmig	-.152***	-.161**
	(-3.444)	(-2.299)
Event		-.130***
		(11.590)
Event*NonArabspeak		-.193
		(-1.446)
Event*Otherimmig		.050***
		(3.510)
Event*Yearm		.001
		(.021)
Event*Hschool		.020
		(1.642)
Event*Assocdeg		.034*
		(2.011)
Event*Bachelordegree		.061***
		(4.432)
Event*Mastersandabove		.054**
		(3.443)
Event*Othermeimmig		.023
		(.262)
Dependent Variable: lnwage	R-squared: 0.163	R-squared: 0.174

Wald Test F-stat: 0.014

NOTES:
* Significant at the .1 level
** Significant at the 05 level
*** Significant at the .01 level

Table 7: Regression Set 4 Results Middle Eastern Immigrants From South Asian Countries

Variables	Regression 2.1	Regression 2.2
Constant	2.386***	2.310***
	(430.736)	(268.798)
SouthAsia	-.085	-.010
	(-1.256)	(-.075)
Otherimmig	-.203***	-.222***
	(-28.821)	(-20.945)
Yearm	-.112***	-.152***
	(-9.971)	(-7.219)
Hschool	.278***	.263***
	(46.945)	(28.551)
Assocdeg	.446***	.420***
	(54.487)	(32.220)
Bachelordegree	.714***	.671***
	(106.252)	(62.280)
Mastersandabove	1.005***	.965***
	(129.982)	(78.206)
Othermeimmig	-.109**	.166*
	(-2.530)	(2.494)
Event		-.130***
		(11.590)
Event*SouthAsia		-.082
		(-.520)
Event*Otherimmig		.050***
		(3.510)
Event*Yearm		.001
		(.021)
Event*Hschool		.020
		(1.642)
Event*Assocdeg		.034*
		(2.011)
Event*Bachelordegree		.061***
		(4.432)
Event*Mastersandabove		.054**
		(3.443)
Event*Othermeimmig		-.292***
		(-3.310)
Dependent Variable: lnwage	R-squared: 0.163	R-squared: 0.142

Wald Test F-stat: 0.202

NOTES:
* Significant at the .1 level
** Significant at the 05 level
*** Significant at the .01 level

The most important result is that the regression analysis fails to show a significant change in Middle Eastern male wages before and after 9/11. Was the wage then affected by a change in supply of Middle Eastern immigrants? According to Table 8 the wage was not affected by a change in supply of Middle Eastern immigrants with respect to native born US citizens. In 1999, the ratio was 509:1; the supply of Middle Eastern immigrants in the labor market increased in 2000 and the ratio became 405:1; the supply slightly decreased in 2002 and the ratio became 410:1; in 2003 the supply again slightly increased and the ratio became 397:1. The supply, therefore, does not appear to have had a significant effect on the Middle Eastern wage rates.

Was there discrimination present in other avenues of the US labor market? Table 9 & Table 10 show that this was also not the case. The Middle Eastern immigrants were not discouraged in the aftermath of the September 11th attacks to join the US labor force as labor force participation rates show an increasing trend. Furthermore, on the contrary, the unemployment rates of Middle Eastern immigrants improved with respect to native born American citizens in the aftermath of the attack.

Table 8: Labor Force Supply Ratio

Year	**Ratio of Male Native Born American Citizens to Male Middle Eastern Immigrants in the Labor Force**
1999	509:1
2000	405:1
2002	410:1
2003	397:1

Table 9: Male Labor Force Participation Rates

Year	**Male Labor Force Participation Rates %**	
	Middle Eastern Immigrants	Native Born US Citizens
1999	74.7	87.3
2000	84.2	87.1
2002	82.7	87.7
2003	87.1	86.9

Table 10: Male Unemployment Rates

Year	**Male Unemployment Rates (%)**	
	Middle Eastern Immigrants	Native Born US Citizens
1999	9.6	3.3
2000	5.3	3.1
2002	5.3	4.7
2003	2	5

Conclusion:

The paper shows that in general Middle Eastern immigrants that are not US citizens do poorer than native born American citizens in the US labor market; with immigrants from Arab speaking Middle Eastern countries fairing the worse; after controlling for education and year of immigration. However, my hypothesis that labor market outcomes for Middle Eastern immigrants have worsened in the aftermath of the September 11th attacks is not supported by my results. Neither is there a significant change in the wage gap between the Middle Easterners and the native born US population nor can one see a significant change in supply or labor force participation rates among Middle Eastern immigrants. On the contrary, employment rates for Middle Eastern immigrants have improved in the aftermath of September 11th attacks.

Even if one says that the American employer's have a general "taste for discrimination" against non-citizen Middle Eastern immigrants, one cannot say that this "taste" has increased in the aftermath of the September 11th. There may be two main reasons for these results. First, even Becker's taste for discrimination model points out that firms cannot be discriminatory in the long run because if they are paying more to their preferred race, they would end up having losses. Therefore, the profit motive in a capitalist system may discourage firms to discriminate on the basis of race. The second, more intuitive reason could be that employers did not increase discrimination in the labor market after the September 11th attacks because they thought that the Middle Eastern immigrants were not responsible for the few extremists that carried out the heinous crime.

One economist commenting on the beauty of a free a market points out, "in economics, labor market discrimination is objectionable not only on moral grounds but also because the unequal treatment of equally productive workers is inefficient." (Lundberg, 1994). Discrimination against Middle Eastern immigrants may be seen in other aspects of life, but in a world of competing firms this discrimination may prove costly. Competitive markets provide the incentive for firms to uphold American values of hospitality. Senator John Chaffee of Rhode Island once famously said that "the United States is made up of all sorts of people from diverse backgrounds and of diverse religious faiths, and that has been one of our great strengths" (Bernstein, 1994).

All in all, the paper accomplished to organize, categorize and analyze data for Middle Eastern in the two years prior and the two years after September 11th. Little or no work has been done analyzing the labor market outcomes for Middle Eastern immigrants in the US. The paper also managed to show that Middle Eastern immigrants do worse off

than the native born US citizens in terms of wages in the US labor market, controlling for the human capital variables. However, to say that the September 11th attacks caused an increase in labor market discrimination against Middle Eastern immigrants is not supported by the evidence.

Future Research:

Future Research could analyze Middle Eastern immigrants in the various professions in the United States and undergo a sector wise analysis. Furthermore, more data could be collected on the language proficiency and work experience, to control for human capital variables profoundly.

References:

Becker, Gary S. *The Economics of Discrimination*. Chicago, IL: The University of Chicago Press, 1957.

Beckley, Gloria T. and Bernstein, Paul "Religious Pluralism, Equal Opportunity and the State" *Equal Employment Opportunity*, 1994, pp. 281-297.

Borjas, George J. Labor Economics. USA: The McGraw Hill Companies, Inc., 2000.

Borjas, George J. *Heaven's Door*. Princeton, NJ: Princeton University Press, 1999.

Borjas, George J. "Self Selection and the Earnings of Immigrants." The American Economic Review 77.4 (1987): 531-553.

Borjas, George J. "The Economics of Immigration." Journal of Economic Literature 32.4 (1994): 1667-1718.

Blau, Francine N. and Kahn M. Lawrence. "Rising Wage Inequality and the U.S. Gender Gap." The American Economic Review Vol. 84.2 (1994): 23-28.

Camarota, Steven A. "Immigrants from the Middle East." *Backgrounder*, Center of Immigration Studies, Aug.2002 < http://www.cis.org/articles/2007/back902.html >

Camarota, Steven A. "Immigrants in the United States." *Backgrounder*, Center of Immigration Studies, Nov.1997 < http://www.cis.org/articles/2007/back1007.html >

England, Paula. "Neoclassical Economists' Theories of Discrimination." *Equal Employment Opportunity*, 1994, pp. 59-71.

IPUMS-CPS (2009). Minnesota Population Center. Retrieved Jan. 25, 2010 from http: //cps.ipums.org

Lundberg, Shelly J. "Antidiscrimination Policies in the Labor Market." *Equal Employment Opportunity*, 1994, pp. 85-105.

McConnell, Campbell R., Brue, Slanley L. and Mcpherson, David A. *Contemporary Labor Economics,* ch. 14. New York, NY: McGraw, 2006.

Schoeni, Robert F., Kevin F. McCarthy and Georges Vernez. *The Mixed Economic Progress of Immigrants*. California: RAND, 1996.

Vernez, George. *Immigrant Women in the U.S. Workforce: Who Struggles? Who Succeeds?* New York: Lexington Books, 1999.

Woolridge, Jeffery M. *Introductory Econometrics.* United States of America: Thomson South Western, 2003.