Office of The Provost
Center for Urban Studies

Arab American Economic Contribution Study

Gauging the economic contributions that persons of Arab ancestry have on Southeast Michigan's Economy

A Report

Submitted to the League for Economic Empowerment
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Contents

Introduction

Our report on the economic contributions of Arab Americans in metropolitan Detroit uses employment figures from the U.S. Census Bureau's Decennial Census and American Community Surveys. These sources provided input data for an econometric model that estimated the number of jobs (employment) and the amount of income (earnings) in the local economy that may be associated with persons of Arab ancestry who reside in the four county metropolitan Detroit area.

During 2006, the Center for Urban Studies' research team met with The League for Economic Empowerment to discuss the feasibility of such a study, its objectives, how the study would be undertaken, the types of data that would be necessary, and the study's limitations.

We soon discovered that our study on the economic contributions of Arab Americans would be the first of its kind in Michigan and one of only a few studies nationally that have sought to estimate the economic contributions of a particular ethnic or cultural group. Our study is also unique in its use of a well-established economic impact model (the REMI model) to gauge the contributions of a particular group within a local economy.

The purpose of the study is to provide useful information to the membership of The League for Economic Empowerment. This includes establishing a base of information and a set of statistical measures on the economic contributions of Arab Americans in metropolitan Detroit. The conclusions and results of the study are intended to assist The League for Economic Empowerment in pursuing its economic and community development objectives.

This study is also a part of the Center for Urban Studies' efforts to describe the diversity of metropolitan Detroit area and to assess the increasing complexity of the considerable contributions of different immigrant and ethnic groups to both the region's economy and social fabric.

We hope this study contributes toward a better understanding of the growing Arab American population in metro Detroit and the dynamics and characteristics of their economic contribution. An improved understanding will help us all to conceive of better economic opportunities for Detroit area.

This study was funded by the League for Economic Empowerment. The League provided feedback on our research design and early drafts of this report. The Center for Urban Studies assumes sole responsibility for the findings and conclusions presented in this report.

Purpose

According to the U.S. Census Bureau, the Detroit Metropolitan area has the largest population of Arab Americans in the United States, leading even the Los Angeles region.[1] Arab Americans already are known to be crucial to the continuing demographic growth of the region, representing one of the largest groups of international immigrants in southeastern Michigan (SEMCOG, 2004). Additionally, without the steady influx of international immigrants in recent years, the Detroit region would have experienced a net population loss because of continuing domestic out-migration.

The purpose of this study is to push our understanding of the Arab American population in the Detroit area one step further, estimating the economic contributions of this group. This study is unique in that it uses a well-established, economic impact model to estimate the economic contributions of a specific population group, Arab Americans, to the economy in four counties in Southeast Michigan.

The League for Economic Empowerment contracted with the Center for Urban Studies at Wayne State University to estimate the economic contributions of Arab Americans to the economy in southeastern Michigan. For this study, southeastern Michigan was defined as Macomb, Oakland, Washtenaw, and Wayne counties.

This study provides estimates of the overall economic contributions of Arab Americans in southeastern Michigan in terms of employment (jobs) and earnings (wages). The study also estimates contributions due to economic "multiplier" or "spin-off" effects - that is, the additional contributions of Arab American economic activity that result from money circulating through the local economy. It should be noted that we are only measuring the contribution of Arab American residents to the economic welfare of the same four counties. The study does not account for the economic benefits from Arab American residents of other counties in Michigan (or other states) to these four counties, nor does it account for the economic contribution of Arab American residents of these four counties to other geographic areas.

This report provides information on the population and employment data collected and used in this study, on the use of Regional Economic Models, Inc.'s economic impact model, the results generated from the model, and the conclusions from this study.

[1] Total Arab American regional population provided by 2000 Census SF4 data set. Los Angeles metropolitan area is defined as Los Angeles, Ventura, and Orange Counties. Detroit metropolitan area is defined as Wayne, Oakland, Macomb, and Washtenaw counties.

Data and Methods

The Center for Urban Studies consulted with economists from Regional Economic Associates to determine methods for accomplishing the objectives of this study. The Regional Economic Models, Inc. (REMI) economic impact model was selected as an appropriate tool to estimate the overall economic contributions of Arab Americans in the four-county region. The REMI model consists of a set of econometric equations that have been developed over nearly 30 years. The model includes detailed information on industries, such as wages, production outputs and industry linkages, and can be used to estimate economic impacts on income and employment for specific industry sectors, occupational levels, and geographic areas.

REMI is an input/output model. It captures input (demand) and output (supply) interrelationships for business, government, and industry sectors in a geographic region. It also captures the consumption of goods and services by these sectors and by households (i.e., consumers). The primary geographic region for which results can be estimated is a county. Models can also be developed for multi-county, state, multi-state, and national levels.

The REMI model links various sectors of the economy such as agriculture, construction, government, households, manufacturing, services, and trade through their respective spending flows. As a result of these linkages, the impact or contribution of economic activity in any sector or geographic area on other sectors and area can be estimated. The effects of modeled economic activity can extend well beyond the sector and area in which the original activity is located. They include not only the direct, or initial, contribution of the economic activity, but also the subsequent, or ripple/spin-off effects that flow from this activity. Direct effects are analogous of the “splash” made by the economic activity and ripple effects are analogous to the subsequent “waves” of economic activity (jobs, new income, production, and spending that are triggered by this splash (REMI, 2006).

Multipliers can be developed for any industry, sector or geographic area in the model to summarize the total impact that can be expected from change in a given economic activity. Multipliers are simple ratios of the total impact resulting from the initial economic activity -- the higher the multiplier, the greater the effect on the local economy.

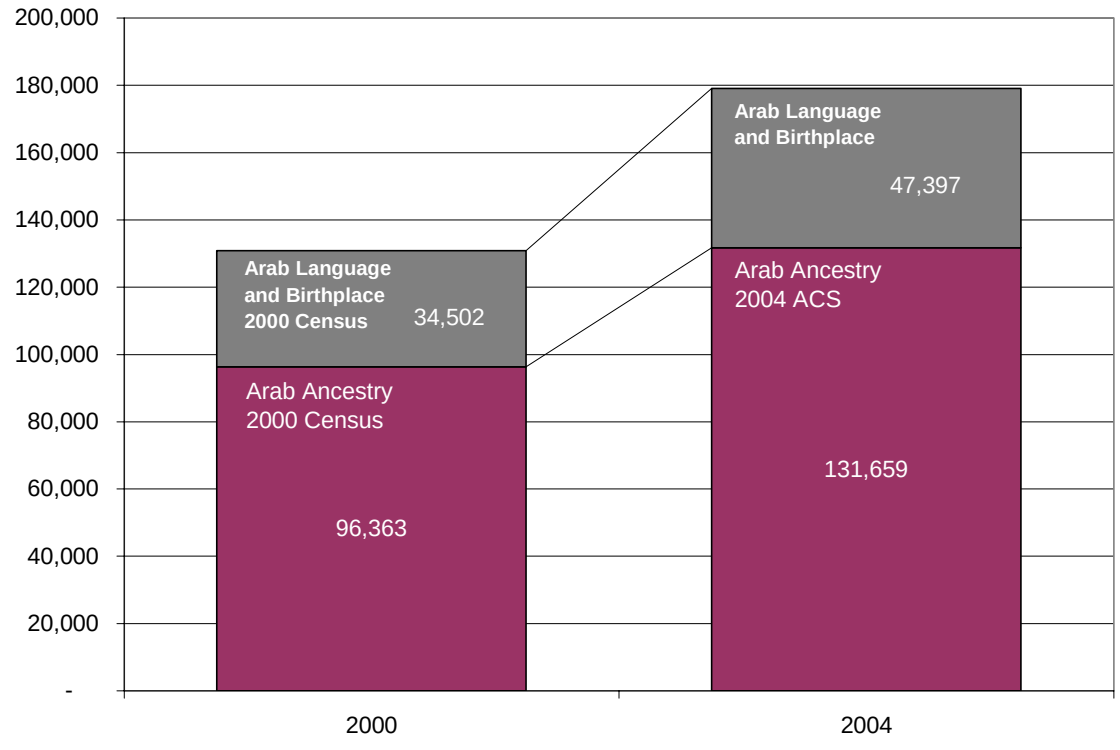
For the estimation of the economic contributions of Arab Americans, the key input variables for the REMI model are the number of employed Arab Americans in each of approximately 50 industries within the four-county region (Wayne, Oakland, Macomb and Washtenaw counties). Once these variables are created, they are inserted into the model. The model is then able to generate estimates of employment and earnings associated with the input data.

Preliminary Steps

As a first step toward generating accurate employment by industry counts for the Arab American population, we began by identifying and defining the Arab American population for this study.

A recent study by Jen'nan Ghazal Read for the Census Bureau illustrates how a researcher's choice of criteria for classifying individuals into ethnic groups can greatly impact a group's estimated population size (and similarly other estimates such as employment by industry). Read compares estimates of the Arab population nationally using census data and alternative selection criteria including ancestry, language spoken, and birthplace. The 2000 Census shows 1.17 million persons who reported at least one Arab ancestor. Read's results showed that adding persons who were born in an Arab country but who did not report Arab ancestry increased the size of the Arab population by 15.9 percent and that adding persons who spoke Arabic at home increased the population by another 9 percent (Ghazal Read, 2006)[2].

Figure 1
Arabic Population Estimates for 2000 and 2004 for the Four-County Region



Note: The chart does not include persons of Assyrian/Chaldean/Syriac ancestry.

[2] Read, Jen'nan Ghazal. January 2006. Alternative Definitions of Mexican and Arab Identity: Demographic and Socioeconomic Implications. Monograph. U.S. Census Bureau.

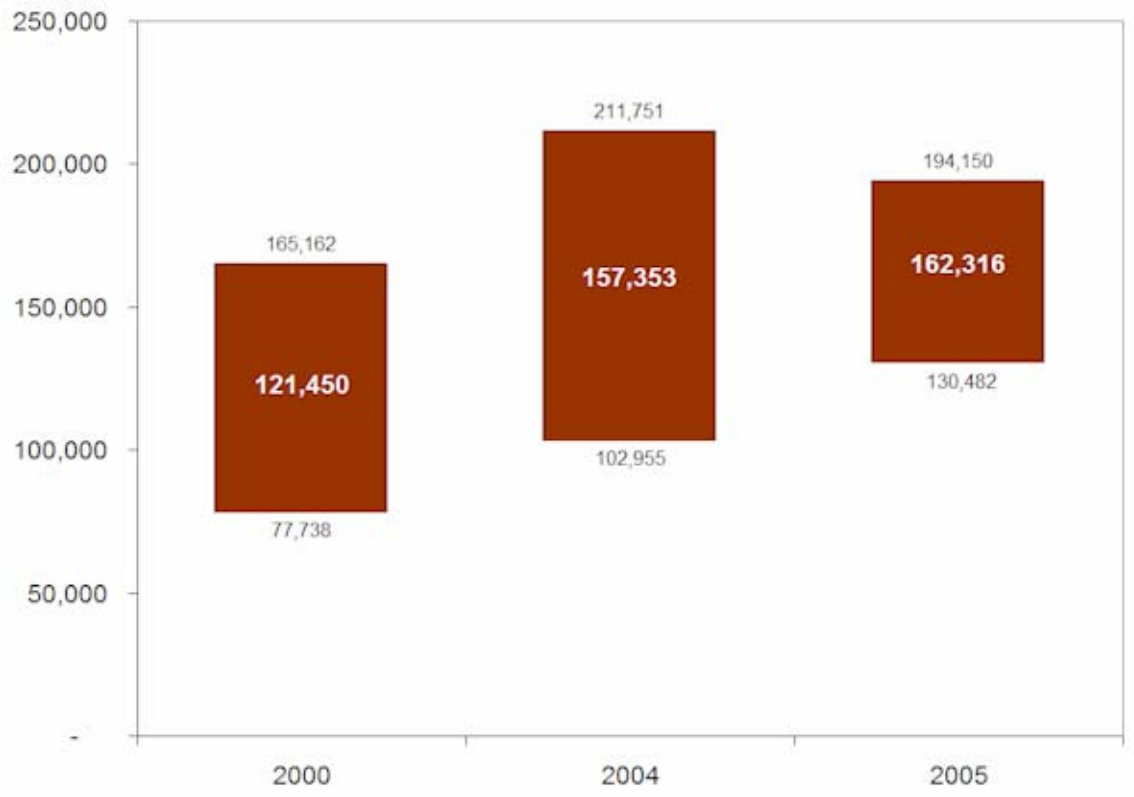
Illustrated in Figure 1, we replicated Read's estimation approach for the Arabic population in the four-county southeastern Michigan region. Using the conventional approach, reported ancestry, showed the Arabic population to be 96,363 in the four-county region in 2000 and 131,650 in 2004. The estimate for 2004 used data from the 2004 American Community Survey, also published by the U.S. Census Bureau. We then used an expanded definition of Arabic that considered reported birthplace and languages spoken.

The net result of using an expanded definition of Arabic to include ancestry, language spoken (Arabic) and birthplace (Arab League nations) for the four-county Metropolitan Detroit area was a gain of 34,502 persons for 2000 and 47,397 for 2004. This 36.0 percent gain in population translated into an increase of nearly 20,000 jobs on the employment side. This represents a substantial increase over employment estimates based on the use of ancestry alone. For this preliminary exercise, we did not include persons of Assyrian/Chaldean/Syriac ancestry. If we had done so, the population and employment estimates would have been much larger. Clearly, however, the choice of selection criteria in identifying and defining Arab Americans has a significant impact on population and employment estimates generated from census data.

As a second preliminary step, we examined data illustrating population change among Arab Americans between 2000 and 2005 by comparing population estimates drawn from the 2000 Census and the 2004 and 2005 American Community Surveys. Again, we estimated the Arab American population using ancestry as the selection criteria. We included all persons reporting Arabic ancestry as their first or second ancestry; however, in this step, we also included persons reporting membership in the Assyrian/Chaldean/Syriac ancestry group. This conforms to the population estimation methods used by well-known researcher John Zogby, whose estimates include the Assyrian/Chaldean/Syriac group, however, Zogby's estimates are also adjusted using a proprietary methodology (Zogby Worldwide, 2006).

Figure 2 illustrates the Arab American population for 2000, 2004 and 2005, using reported ancestry as the selection criteria and includes individuals reporting Arab or Assyrian/Chaldean/Syriac ancestry. The chart presents the point estimates and 90% confidence intervals, and clearly suggests an increasing Arab American population in the four-county region over the past five years.

Figure 2
Arab Americans Living in the Four-County Region, 2000, 2004, 2005
Estimated population based on reported ancestry
Point estimate (in white text) and 90% confidence intervals



Note: Includes persons reporting Arab or Assyrian/Chaldean/Syriac ancestry.
Sources: American Factfinder. 2000 U.S. Census, 2004 and 2005 American Community Surveys.

Methods to identify Arab Americans in the Census and American Community Surveys have included the use of ancestry, birthplace, and language-spoken criteria. Perhaps the most serious "counting issue" with respect to using census data is non-response to ancestry questions. For the four-county region in the 2000 Census, 16.5 percent (or 720,398) of the population of 4.4 million individuals did not provide ancestry information. Many researchers believe that non-response to ancestry questions in the decennial census is more common among immigrant groups. This suggests that population and employment estimates for groups based on ancestry classification will likely be conservative estimates.

Population Estimates

As a result of these preliminary steps, we decided to follow conventional practice in defining the Arab population by using reported ancestry as the selection criteria. The 2000 decennial census provided individuals the option to report one or two ancestry groups. Accordingly, Arab Americans may be defined by selecting all persons whose first ancestry or second ancestry falls within the Census Bureau's definition of Arab. The 2000 Census classifies individuals as Arabic whose ethnic origin is one of the 22 countries that are members of the Arab League. The Census Bureau reports this data as "total ancestry".

This approach follows that used by Census Bureau researchers Angela Brittingham and G. Patricia de la Cruz in "We the People of Arab Ancestry in the United States", published in 2003, but also provides for an expanded definition of Arab American used by researcher John Zogby, which includes the Chaldean population.[3] Specifically, the data used in this study included all persons whose first ancestry or second ancestry reported in the Census was either Arab or Assyrian/Chaldean/Syriac. The Chaldean population represents a significant portion (25% or 32,322 persons) of the overall Arab American population in Southeast Michigan.

In all, this approach yielded a total of 126,341 persons of Arab/Chaldean ancestry living in the four-county region in 2000. The estimation was re-run for 2005 using the data from the 2005 American Community Survey. For 2005, the estimated Arab/Chaldean population was 162,318. The population totals by county are presented in Figure 3.

Figure 3
Population Estimates for the Arab American Population for 2000 and 2005

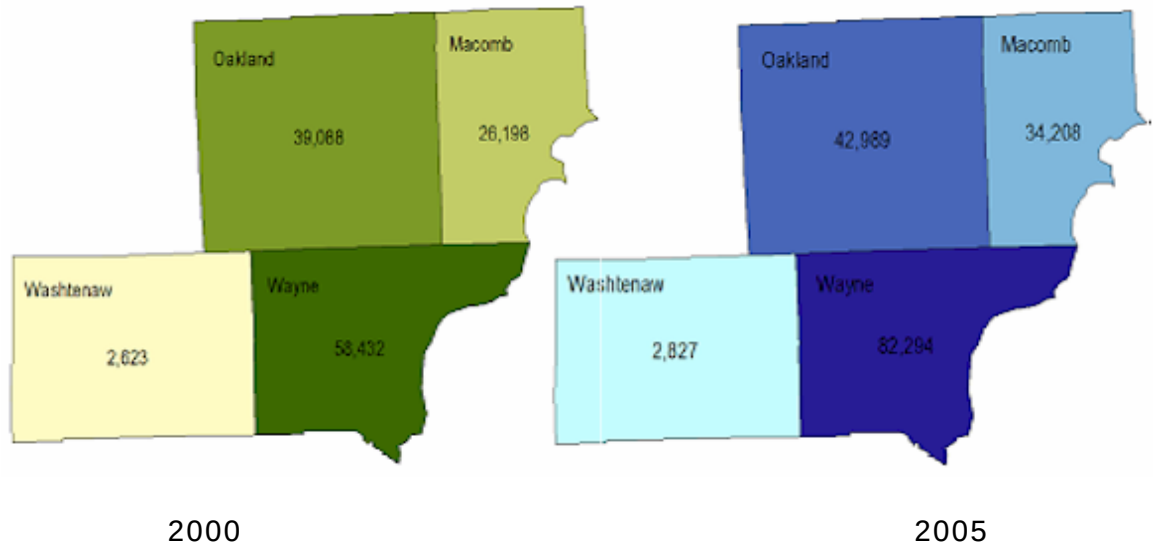
	Counties				
Population	Macomb	Oakland	Washtenaw	Wayne	Total
2000	26,198	39,088	2,623	58,432	126,341
2005	34,208	42,989	2,827	82,294	162,318
difference	31%	10%	8%	41%	28%

Note: Arab Americans here include Arabic and Chaldean ancestries.
Sources: American Factfinder. 2000 U.S. Census, 2004 and 2005 American Community Surveys.

[3] Brittingham, Angela and G. Patricia de la Cruz. March 2005. We the People of Arab Ancestry in the United States: Census 2000 Special Reports. Monograph. U.S. Census Bureau.

In 2000, Wayne County had the largest Arab American population at 58,432, followed by Oakland County at 39,068. The 2000 and 2005 population estimates are illustrated geographically in Figure 4. It should be noted that the 2005 population statistics are estimates based on a sample of the respondents to the 2005 American Community Survey. Of the nearly 100,000 Michigan respondents included in the 2005 Public Use Microdataset (PUMS), about 33,000 respondents were from the four-county Metropolitan Detroit area. Of these, just over 1,000 individuals were identified as being of Arab/Chaldean ancestry and thus provide the basis for calculating population and employment estimates for 2005.

Figure 4
Arab American Population Estimates by County in 2000 and 2005



Note: Arab Americans here include Arabic and Chaldean ancestries.
Sources: 2000 U.S. Census, 2005 American Community Survey

Once the population has been defined, employment by industry counts may be generated. The key input variables for the REMI model are employment by industry figures for the population of interest – Arab Americans – for the four-county metropolitan area.

Note on Data Source / Estimates

Early on in the research design and planning stages of this study we investigated the available sources of data on employment levels for Arab Americans in the four county Detroit area. These sources ranged from traditional sources such as the U.S. Census Bureau to survey research projects by universities and private research firms, such as Zogby

International, Inc. For example, while the 2000 Census identified 151,493 persons of Arab/Chaldean ancestry living in Michigan, Zogby International estimated a statewide population of 490,000. This figure is more than three times that of census data.

Reasons for the U.S. Census undercount include the effect of the sample methodology on small, unevenly distributed ethnic groups, high levels of intermarriage among the third and fourth generations, and distrust/misunderstanding of government surveys among more recent immigrants.

Zogby International's methodology is available by purchasing their Demographic Handbook (at a cost of $1,000), however, the research firm indicates that their estimates are based on a combination of official figures provided by the Census Bureau and "the best on-the-ground estimates compiled after years of visiting, working in, interviewing leaders in, and observations of over 100 Arab American communities" (Zogby Worldwide, 2006).

While these various data sources provide competing estimates of the overall Arab American population in the Detroit area, it was determined that only the U.S. Census Bureau's 2000 census provides employment counts by industry by county and by ancestry group. As a result, the input data we used for the economic impact model are drawn from the U.S. Census Bureau's 2000 Census.

To address the undercount issue in using U.S. Census Bureau data, we thought it reasonable to adjust overall employment levels up by an amount indicated by results from the recent 2005 American Community Survey (ACS). We describe this approach in the next section.

Employment by Industry for Arab Americans

Employment by industry data for specific population groups is also available from the United States Census Bureau. The source is data from the 2000 decennial U.S. Census long form survey that collected data on reported ancestry and employment by industry. These data are made available in two formats. The available datasets include the Summary File 4 (SF4) dataset and the 5% Public Use Microdataset (5% PUMS). The former dataset is publicly available through the Bureau's American Factfinder website (www.census.gov). The latter dataset includes a sample of raw survey data (5% of the all Michigan respondents). Analysts may use this sample to generate employment-by-industry estimates for regions and specific population groups.

We used the American Factfinder database to query the 2000 Census for employment by industry counts for Arab Americans (as defined by reported ancestry and including the Assyrian/Chaldean/Syriac group). In all, employed Arab Americans accounted for a total of 47,924 jobs in 2000 in the four-county region. See Figure 6.

Our second approach used the U.S. Census Bureau's recent 2005 American Community Survey (published August 29, 2006), which also collected data on ancestry groups, place of birth, language spoken, employment, and industry. This survey may be used to estimate population and employment levels by industry for Arab Americans.

We used the 2005 American Community Survey (ACS) Public Use Microdata Sample (PUMS) files for Michigan. These data are a random sample of the actual responses to the 2005 American Community Survey. As with the population estimates, of the nearly 100,000 Michigan respondents included in this sample, about 33,000 respondents were from the four-county Detroit metropolitan area. Of these, slightly more than 1,000 individuals were identified as being of Arab/Chaldean ancestry.

To estimate Arabic employment by industry, we included all persons reporting Arabic ancestry as their first or second ancestry. We also included persons reporting membership in the Assyrian/Chaldean/Syriac ancestry group.

In all, total Arab American employment was 68,515, with roughly 40% accounted for by Arab Americans individuals living in Wayne County. These estimates are illustrated in Figure 6.

Figure 6
Arab American Employment by Industry in 2000 and 2005

Industry	Employment in 2000	2005 Estimate
Forestry, Fishing, Mining, Other	16	23
Utilities	139	199
Construction	1,544	2,207
Manufacturing	8,214	11,743
Wholesale Trade	1,719	2,458
Retail Trade	13,035	18,636
Transportation and Warehousing	1,252	1,790
Information	1,019	1,457
Finance and Insurance	1,491	2,132
Real Estate, Rental, Leasing	879	1,257
Professional and Technical Services	2,743	3,922
Management of Companies	32	46
Administrative and Waste Services	1,037	1,483
Educational Services	2,865	4,096
Health Care and Social Services	3,858	5,516
Arts, Entertainment, Recreation Services	529	756
Accomodation and Food Services	4,065	5,812
Other Services	2,769	3,959
Public Administration	718	1,026
Total	47,924	68,515

Source: Estimates calculated using 2000 Census and 2005 American Community Survey.

While the 2005 ACS is more current, it also is a much smaller sample than the 2000 Census and thus the resulting estimates are not are precise as those from the 2000 Census. To generate a current measure of the economic contribution of the Arab American community in Southeast Michigan, we had planned to use the 2000 Census data to allocate Arab American employment by industry, and then to adjust these values by a constant proportion to equal the total employment count as estimated by the 2005 ACS.

Unfortunately, the 2000 Census and the 2005 ACS showed much wider differences in both population and employment levels than we anticipated. As shown in Figure 7, the 2000 Census data showed a total of 47,924 Arab Americans employed in the four-county region, while the 2005 ACS data showed 68,515 employed Arab Americans in the region.

Figure 7
Arab American Employment by Industry and County
for 2000 and 2005

	Counties				
Employment	Macomb	Oakland	Washtenaw	Wayne	Total
2000	11,237	16,315	2,737	17,635	47,924
2005	17,072	20,969	1,561	28,913	68,515
difference	52%	29%	-43%	64%	43%

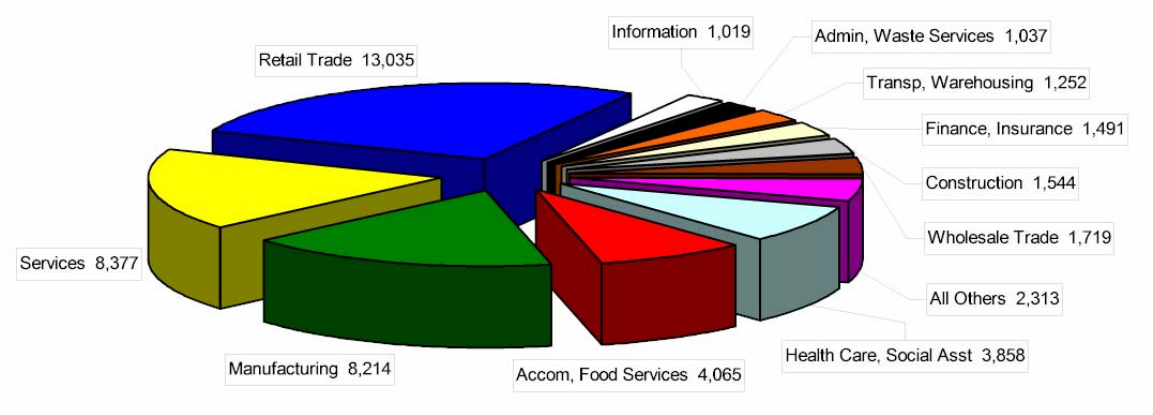
Sources: 2004 and 2005 American Community Survey and 2000 U.S. Census

Because of these large differences in employment, we decided to generate two estimates of the contribution of Arab Americans to the economic welfare of Southeast Michigan - one using the data from the 2000 Census and another using the data from the 2005 ACS. Given all of the issues inherent in defining and estimating the population and employment levels of Arab Americans from census data, we believe this approach provides the most objective assessment of the economic contribution of Arab Americans in southeast Michigan. As noted previously, the 2000 Census data were used to determine the distribution of Arab American workers across industries because of the larger sample size -- which provides for more precise estimates.

Figure 8 illustrates the distribution of Arab American employment by industry for the four-county area in 2000. More than one quarter of employed Arab Americans in the four-county area (27.2 percent) work in retail trade. In contrast, barely one-tenth of all residents work in this industry (11.3 percent).

Arab Americans also are over-represented substantially in the accommodations and food services industry and in other services (primarily repair and personal services). This finding is important because the industries with a disproportionately large share of Arab Americans tend to pay lower wages and to use fewer intermediate inputs in the production process than other industries where Arab Americans generally are under-represented.

Figure 8
Arab American Employment by Major Industry (2000) in the Four County Area



Note: Services combines several service sectors.
Source: U.S. Census Bureau, American Factfinder

Employment by industry and county are shown in the *Appendix - Table 1*. The table also shows the percentage distribution of aggregate employment in the four-county area for both Arab Americans and all workers.[4] We applied the same distribution to the total number of employed Arab Americans derived from the 2005 ACS data; we simply inflated each data cell by 43 percent (68,515 / 47,924).

With employment by industry estimates for Arab Americans now generated, the data may be inserted into the REMI model to estimate their economic contribution within the four-county southeastern Michigan region.

The REMI model quantifies the contribution of these jobs but also the spin-off economic contribution of Arab American workers, both from their purchases of goods and services directly (induced effect) and the purchases of goods and services in the production process in the industry in which they work (indirect effect).

[4] Note that the distribution of employment by industry reported by the Decennial Census is significantly different from the distribution of employment found in other government statistical reports, such as the U.S. Department of Labor's Quarterly Census of Employment and Wages (QCEW). A small part of the difference can be explained by differences between residence and establishment employment and the inclusion of self-employed workers in the census-based data, but the greatest discrepancy appears to reflect confusion on the part of individual respondents to the census questionnaire with respect to their industry of employment. For example, the number of census respondents who report that they work in Corporate Management is a tiny fraction of the number recorded by the QCEW using administrative records. Undoubtedly many people (of all nationalities), working at GM and Ford Headquarters, for example, are reporting on their census forms that they work in the auto manufacturing industry, while in truth they are working in corporate management according to the North American Industry Classification System.

REMI Model

The REMI model is the most widely applied regional economic forecasting and policy analysis tool in the nation. The methodology was developed in the mid-1970s by G. I. Treyz, A. F. Friedlander, and B. H. Stevens (Economics Department, University of Massachusetts), and a core version of the model was then developed for the National Academy of Sciences. REMI was subsequently established in 1980, and since then has been developing models that answer "what if" questions about the effect of policy initiatives on the economy of local regions. The model has been generalized for all counties and states in the United States, or any combination of counties and states.

The REMI model is designed to generate estimates of ripple and spin-off effects resulting from direct production activity (e.g., jobs). Ripple or spin-off effects come from two sources: indirect effects, such as a business' purchases from local suppliers (e.g., steel, concrete, professional services); and expenditure-induced effects, or spending by people who receive income from their employment resulting from the direct and indirect effects (e.g., spending by realtors of income received from selling homes to construction workers). The sum of the direct and spin-off activities determines the total effect.

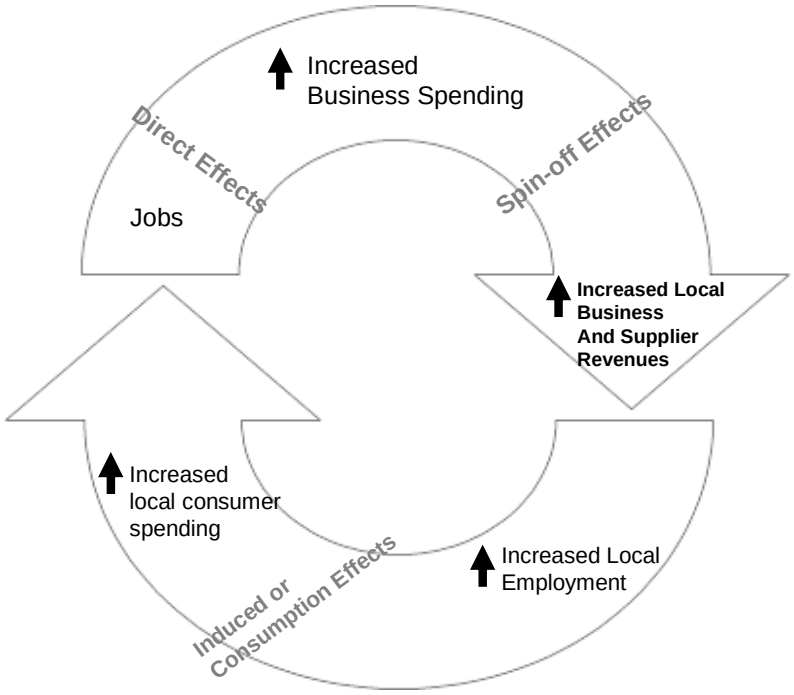
The results of the model may also be summarized by metrics called "multipliers". Multipliers are simple ratios and provide estimates of the total impact resulting from initial economic activity or a change in economic output. The higher the multiplier, the greater the effect on the local economy. Figure 9 illustrates the concepts of multipliers, direct, spin-off, and induced effects.

One of the REMI model's most important features allows spending activity to "leak out" of the local community as individuals purchase products made in other states and even other countries. Consequently, as the geographic area becomes smaller, the share of "spin-off" activity retained in the area of interest tends to decline.

Figure 9
Multiplier Effect Diagram

Multipliers summarize the total impact that can be expected from change in a given economic activity.

For example, new jobs or new export activity by a local firm are economic changes which can spur ripple effects or spin-off activities. Multipliers measure the total economic impact of these new activities, including the resulting spin-off activities and increased consumer spending.



In this particular case, the model assigns Arab American workers to their appropriate industry categories and assumes that they produce goods and services as if they were new additions to the local economy. However, since this is a study of the contribution of the Arab American workforce and not an impact estimate of what would happen to the local economy if the Arab American workforce disappeared (or doubled), we disabled several of the equilibrating responses built into the REMI model. For example, we did not allow the REMI model to increase the wage rate automatically in response to an increase in employment from the addition of new production activities.

The results of the modeling are provided in the following section.

Results

Arab Americans living in the four-county southeast Michigan region directly account for an estimated 47,924 to 68,515 jobs. These jobs help support an additional 51,570 to 73,026 jobs in the region due to the effects that business and consumer spending have when money circulates through the local economy.

In terms of total contribution, employment associated with Arab American economic activity represents between 99,494 and 141,541 jobs or 4.0 to 5.7 percent of total employment in the four-county southeastern Michigan region. This level of employment represents $5.4 billion to $7.7 billion in wage and salary earnings in the local economy. This activity includes jobs held by Arab Americans and those jobs that result from the associated business and consumer spending.

The contribution of Arab American jobs may be expressed in terms of an economic multiplier effect for employment in the region. The multiplier computed from the REMI model was 2.06 to 2.08. This means, on average, every Arab American job helps contribute more than one additional job to the region's economy.

As the "Multiplier Effect Diagram" in Figure 9 shows, each Arab American worker creates jobs when he spends his own earnings in the regional market, as he buys products that other workers produce or sell. We estimate that each Arab American worker spins off an additional $1.06-$1.08 in additional economic activity for every $1.00 he makes.

The economic contribution metrics computed by the REMI Model include employment by industry and county, and total earnings by industry and county. The model also provides information to estimate state tax revenues associated with the overall level of economic activity. The tables in the Appendix present data for the four-county region and the share of total employment and total earnings attributable to the local employment of Arab Americans.

Both the employment and earnings estimates are consistent with the U.S. Department of Commerce, Bureau of Economic Analysis (BEA) measures of these concepts. The BEA employment measure includes both full- and part-time wage and salary employment and self-employment (also known as proprietor's employment). Wage and salary employment is an annual average, while self-employment is the total of all persons reporting self-employment earnings at any point during the year. The BEA measure is the broadest measure of employment reported by any government agency.[5]

[5] The BEA data set also includes estimates of farm and military employment and earnings, but the REMI model treats these as exogenous sectors, thus they are not changed by our "policy experiment," and therefore are not reported here.

Jobs/Employment

In the four-county Southeast Michigan region, the Arab American community is associated with 99,494 jobs, or 4.0 percent, of total employment if we use the 2000 Census data, and 141,541 jobs, or 5.7 percent, of total employment if we use the 2005 ACS data.

About 20 percent of all of the jobs attributable to the presence of the Arab American community are in retail trade; this reflects the very high concentration of Arab Americans in this industry. Manufacturing ranked second at 13.5 percent of all jobs, followed by professional and technical services at 8.2 percent.

Detailed figures for employment by industry of Arab American workers in the four-county area using the 2000 Census estimates and the 2005 American Community Survey are shown in the *Appendix - Table 1. Table 2* illustrates the same data in terms of the percent share of employment by industry for Arab Americans and provides a comparison to the population of all workers in the four-county area.

Figures for employment by industry associated with the contribution of Arab Americans in the four-county area using the 2000 Census estimates and the 2005 American Community Survey are shown in *Appendix - Table 3 and Table 4.* These statistics include jobs held by Arab Americans (included in *Table 1*) and those jobs that result from associated business and consumer spending.

Accordingly, our estimates show that the Arab American community contributes 99,494 to 141,541 jobs, or 4.0 to 5.7 percent, of total employment in the four-county region.

Earnings

Earnings are the sum of wage and salary disbursements, employer contributions to pensions and insurance, employer contributions to government social insurance funds, and self-employment (proprietor's) earnings. In the vernacular, they are the sum of total compensation (wages plus fringe benefits) for employees and earnings (revenue minus expenses) for sole proprietors.

The Arab American community contributes toward $5.4 billion in total earnings in the four counties, using the 2000 Census data as the baseline for the analysis, and $7.7 billion in total earnings using the 2005 ACS data. These figures are annual estimates.

The share of total earnings that can be attributed to the economic activity of Arab Americans is somewhat less than the share of total employment, 3.7 percent compared with 4.0 percent using the 2000 Census data, and 5.3 percent compared with 5.7 percent using the ACS data. The difference between the share of earnings and the share of employment reflects the fact, shown in *Table 1*, that a disproportionately large share of Arab Americans work in relatively low-wage industries such as retail trade and accommodations and food services.

Earnings from manufacturing jobs account for almost 27 percent of the total contributions of Arab Americans (based on 2005 ACS data). Professional and technical services rank second at 12.5 percent. Retail trade earnings are third with 10.6 percent.

Detailed figures for total earnings by industry associated with the economic contribution of Arab American workers in the four-county area using the 2000 Census estimates and the 2005 American Community Survey are shown in the *Appendix -Table 5 through Table 8*. These statistics include the earnings of Arab Americans and earnings from jobs that result from the associated business and consumer spending.

Taxes

The REMI model's information on earnings (income) was used to estimate state-level tax revenues associated with the economic activity summarized by the model.

In terms of state government tax revenue, the economic activity of employed Arab Americans generates approximately $382 million in state tax revenue using the 2000 Census employment estimates, and $544 million in state tax revenue using the 2005 employment estimates from the American Community Survey. In percentage terms, these amounts represent between 1.8 and 2.6 percent of all state tax revenues, which were roughly $21 billion in 2005.

Geography

Wayne County had the largest number of jobs associated with Arab American economic activity - 40,902 using the Census data and 58,170 using the ACS data. This amounts to 4.3 percent of all employees in the county based on census data or 6.1 percent based on the ACS data.

The largest presence or share of jobs attributable to the economic activity of Arab Americans occurs in Macomb County. Either 5.2 percent (Census data) or 7.3 percent (ACS data) of all jobs in Macomb County can be attributed to the Arab American community. Washtenaw County has the smallest number and share of jobs that can be attributed to Arab Americans.

This undoubtedly reflects the relatively small number of Arab Americans residing in Washtenaw County compared with the other three counties.

Among the four counties, the Arab American community accounts for the largest share of earnings in Macomb County (4.7 percent using the 2000 Census data and 6.6 percent using the ACS data). Washtenaw County has the smallest share of earnings attributable to Arab-Americans.

Some general geographic patterns in Arab American employment (and earnings) include a somewhat heavier concentration (50%) in manufacturing and retail jobs in Macomb County and fewer jobs in services compared to the other counties. Oakland and Washtenaw counties were more concentrated in professional and technical services, educational, and health care services than Wayne and Macomb. Oakland County, however, showed the highest concentration (33 percent) in retail trade employment for Arab Americans.

Key Facts

Using U.S. Census data on reported ancestry, there were over 162,000 Arab Americans living in the four-county Southeast Michigan region in 2005.

Total employment for Arab Americans in 2005 was 68,515.

In terms of total contribution, Arab American economic activity supports between 99,494 and 141,541 jobs in the four-county southeastern Michigan region.

This represents $5.4 billion to $7.7 billion in wage and salary earnings in the local economy and includes jobs held by Arab Americans and those jobs that result from the associated business and consumer spending.

State taxes collected from this economic activity represent between 1.8 and 2.6 percent of all state tax revenues collected in 2005.

Conclusions

The fact that the Detroit region has the largest number of people of Arabic ancestry in the U.S. represents an opportunity for the region to build bridges out to other urban areas, peoples, and countries. People of Arabic ancestry represent a large and growing share of the world's population. There are over 332 million people in Arab League nations. Beyond this, Arabs represent a significant core within Islam, the religion of approximately 1.5 billion people worldwide.

The current study demonstrates that Southeast Michigan is already benefiting substantially from its connection with the Arab world. Residents of Arabic ancestry contribute heavily to our economy, somewhere between $5.4 and $7.7 billion in total earnings, or between 99,494 and 141,541 jobs. The upper end of these earnings estimates is more than twice the size of the City of Detroit budget. The number of jobs is more than all the manufacturing jobs in Wayne County. These numbers represent major contributions and an important avenue to economic growth for this region.

Cities are not simply places where people live. They are the contemporary counterparts of the crossroads, the marketplaces and fairs of the ancient world. They are where peoples meet, merge and come to know one another. Miami has become a meeting place for the people of North, South and Central America. San Francisco, Seattle, and Vancouver are cities where the people of Asia work, play and live with the people of America. Perhaps Detroit is becoming a place where the people of the Americas and the people of the Arab world can meet, work, develop businesses and create opportunities. Recognizing the contributions of Arab Americans to the regional economy may only be the beginning.

APPENDIX

Data Tables

Table 1. Employment by Industry for Arab Americans in the Four-County Region, Using 2000 Census Data

	Census Employment Count, Arab-Americans				
	Macomb	Oakland	Washtenaw	Wayne	4 County
Forestry, Fishing, Mining, Other	0	7	0	9	16
Utilities	47	8	5	79	139
Construction	364	506	50	624	1,544
Manufacturing	2,488	2,042	208	3,476	8,214
Wholesale Trade	347	740	14	618	1,719
Retail Trade	3,120	5,327	260	4,328	13,035
Transportation and Warehousing	243	141	63	805	1,252
Information	186	417	35	381	1,019
Finance and Insurance	419	637	42	393	1,491
Real Estate, Rental, Leasing	177	400	44	258	879
Professional and Technical Services	479	1,270	124	870	2,743
Management of Companies	10	11	0	11	32
Administrative and Waste Services	224	308	63	442	1,037
Educational Services	500	871	420	1,074	2,865
Health Care and Social Services	695	1,556	234	1,373	3,858
Arts, Entertainment, Recreation Services	181	128	16	204	529
Accomodation and Food Services	933	1,066	165	1,901	4,065
Other Services	655	771	75	1,268	2,769
Public Administration	169	109	47	393	718
Total	11,237	16,315	1,865	18,507	47,924

Table 2. Share of Employment by Industry for Arab Americans and Overall Population for the Four-County Region

	Census Employment Count, Arab-Americans					All Persons
	Macomb	Oakland	Washtenaw	Wayne	4 County	Total
Forestry, Fishing, Mining, Other	0%	0%	0%	0%	0%	0%
Utilities	0%	0%	0%	0%	0%	1%
Construction	3%	3%	3%	3%	3%	5%
Manufacturing	22%	13%	11%	19%	17%	22%
Wholesale Trade	3%	5%	1%	3%	4%	3%
Retail Trade	28%	33%	14%	23%	27%	11%
Transportation and Warehousing	2%	1%	3%	4%	3%	4%
Information	2%	3%	2%	2%	2%	3%
Finance and Insurance	4%	4%	2%	2%	3%	4%
Real Estate, Rental, Leasing	2%	2%	2%	1%	2%	2%
Professional and Technical Services	4%	8%	7%	5%	6%	7%
Management of Companies	0%	0%	0%	0%	0%	0%
Administrative and Waste Services	2%	2%	3%	2%	2%	3%
Educational Services	4%	5%	23%	6%	6%	8%
Health Care and Social Services	6%	10%	13%	7%	8%	11%
Arts, Entertainment, Recreation Services	2%	1%	1%	1%	1%	2%
Accomodation and Food Services	8%	7%	9%	10%	8%	6%
Other Services	6%	5%	4%	7%	6%	4%
Public Administration	2%	1%	3%	2%	1%	3%
Total	100%	100%	100%	100%	100%	100.00%

Source: U.S. Census Bureau, American Factfinder

Table 3. REMI Model - Employment by Industry Due to Arab Americans by County for the Four-County Region, Using 2000 Census Employment Data

	Employment Due to Arab-Americans				
	Macomb	Oakland	Washtenaw	Wayne	4 County
Forestry, Fishing, Mining, Other	48	42	5	54	149
Utilities	60	34	14	211	319
Construction	940	1,232	107	1,294	3,573
Manufacturing	3,962	3,501	362	5,614	13,439
Wholesale Trade	820	1,992	84	1,947	4,843
Retail Trade	4,384	7,492	640	7,267	19,782
Transportation and Warehousing	405	355	85	1,859	2,703
Information	276	1,083	121	950	2,431
Finance and Insurance	828	2,349	122	1,554	4,853
Real Estate, Rental, Leasing	420	1,133	104	753	2,411
Professional and Technical Services	1,296	3,698	313	2,834	8,141
Management of Companies	147	565	35	805	1,552
Administrative and Waste Services	1,180	2,418	221	2,520	6,340
Educational Services	580	1,194	483	1,580	3,837
Health Care and Social Services	952	2,274	403	2,594	6,224
Arts, Entertainment, Recreation Services	361	584	106	853	1,902
Accomodation and Food Services	1,635	2,482	395	4,139	8,651
Other Services	1,333	1,980	242	3,203	6,758
Public Administration	251	283	182	869	1,586
Total Employment	19,878	34,690	4,025	40,902	99,494
Share of Area Employment	5.15%	3.82%	1.74%	4.31%	4.02%

Table 4. REMI Model - Employment by Industry Due to Arab Americans by County for the Four-County Region, Using 2005 American Community Survey Data

	Employment Due to Arab-Americans				
	Macomb	Oakland	Washtenaw	Wayne	4 County
Forestry, Fishing, Mining, Other	68	60	7	77	213
Utilities	84	49	20	299	453
Construction	1,340	1,757	152	1,843	5,092
Manufacturing	5,636	4,984	517	7,983	19,120
Wholesale Trade	1,165	2,836	120	2,770	6,891
Retail Trade	6,217	10,634	912	10,305	28,068
Transportation and Warehousing	575	505	121	2,647	3,849
Information	391	1,540	173	1,350	3,454
Finance and Insurance	1,176	3,347	174	2,215	6,912
Real Estate, Rental, Leasing	598	1,615	149	1,073	3,435
Professional and Technical Services	1,841	5,272	447	4,038	11,598
Management of Companies	211	808	50	1,150	2,218
Administrative and Waste Services	1,682	3,453	316	3,594	9,045
Educational Services	821	1,694	687	2,239	5,441
Health Care and Social Services	1,358	3,242	575	3,698	8,873
Arts, Entertainment, Recreation Services	512	833	151	1,217	2,713
Accomodation and Food Services	2,322	3,533	563	5,881	12,299
Other Services	1,893	2,819	346	4,554	9,611
Public Administration	358	403	259	1,235	2,253
Total	28,250	49,384	5,737	58,170	141,541
Share of Area Employment	7.32%	5.44%	2.47%	6.13%	5.72%

Table 5. REMI Model – Total Earnings by Industry Due to Arab Americans by County for the Four-County Region, Using 2000 Census Employment Data

	Earnings Due to Arab-Americans				
	Macomb	Oakland	Washtenaw	Wayne	4 County
Forestry, Fishing, Mining, Other	292,494	1,244,379	138,505	3,696,765	5,372,143
Utilities	7,575,170	8,451,022	5,345,817	48,643,804	70,015,813
Construction	64,053,186	83,445,046	8,159,129	78,399,838	234,057,198
Manufacturing	404,837,594	382,709,668	39,447,315	629,440,054	1,456,434,632
Wholesale Trade	50,701,148	170,714,555	6,386,021	136,421,503	364,223,227
Retail Trade	125,438,659	230,148,020	18,222,004	206,470,125	580,278,808
Transportation and Warehousing	21,507,198	19,742,949	4,240,976	125,479,559	170,970,682
Information	16,778,481	80,777,413	8,017,687	76,998,431	182,572,011
Finance and Insurance	42,762,300	168,069,589	6,365,903	96,558,178	313,755,969
Real Estate, Rental, Leasing	15,714,321	67,900,996	4,990,209	37,406,048	126,011,575
Professional and Technical Services	82,716,422	313,180,284	24,361,194	257,826,593	678,084,494
Management of Companies	16,411,449	61,230,220	2,918,541	92,991,079	173,551,289
Administrative and Waste Services	34,370,057	90,457,719	7,767,827	85,593,209	218,188,812
Educational Services	10,351,946	26,447,120	6,279,861	47,470,733	90,549,660
Health Care and Social Services	42,290,149	107,426,349	16,867,444	112,429,927	279,013,870
Arts, Entertainment, Recreation Services	4,748,623	16,863,127	1,160,016	36,660,364	59,432,130
Accomodation and Food Services	23,954,473	44,776,168	6,751,568	73,273,047	148,755,256
Other Services	33,180,297	56,398,953	6,311,280	85,981,416	181,871,945
Public Administration	15,103,973	15,739,139	10,651,174	47,948,944	89,443,231
Total Earnings	1,012,787,939	1,945,722,717	184,382,471	2,279,689,618	5,422,582,745
Share of Area Earnings	4.65%	3.57%	1.49%	4.06%	3.74%

Table 6. REMI Model – Total Earnings by Industry Due to Arab Americans by County for the Four-County Region, Using 2005 American Community Survey Data

	Earnings Due to Arab-Americans				
	Macomb	Oakland	Washtenaw	Wayne	4 County
Forestry, Fishing, Mining, Other	418,263	1,776,404	198,079	5,275,359	7,668,105
Utilities	10,697,570	12,050,702	7,625,135	69,175,420	99,548,827
Construction	91,259,869	118,974,317	11,639,598	111,633,619	333,507,402
Manufacturing	575,948,248	544,778,203	56,308,093	894,969,794	2,072,004,338
Wholesale Trade	72,006,648	243,051,718	9,123,444	194,144,666	518,326,476
Retail Trade	177,916,964	326,672,736	25,979,722	292,914,312	823,483,733
Transportation and Warehousing	30,571,043	28,132,186	6,046,302	178,688,164	243,437,695
Information	23,711,186	114,874,036	11,441,509	109,402,329	259,429,061
Finance and Insurance	60,705,926	239,598,687	9,082,452	137,614,810	447,001,876
Real Estate, Rental, Leasing	22,376,548	96,766,842	7,117,506	53,272,211	179,533,106
Professional and Technical Services	117,548,891	446,482,020	34,780,445	367,270,233	966,081,589
Management of Companies	23,433,652	87,534,181	4,173,413	132,952,704	248,093,949
Administrative and Waste Services	49,008,739	129,171,551	11,087,823	122,085,239	311,353,353
Educational Services	14,660,535	37,521,722	8,922,443	67,270,023	128,374,723
Health Care and Social Services	60,295,847	153,187,492	24,064,397	160,221,925	397,769,660
Arts, Entertainment, Recreation Services	6,747,623	24,071,720	1,657,798	52,323,006	84,800,148
Accomodation and Food Services	34,018,364	63,736,331	9,623,820	104,116,136	211,494,650
Other Services	47,118,565	80,278,324	9,004,388	122,224,363	258,625,639
Public Administration	21,506,421	22,387,772	15,160,996	68,117,101	127,172,290
Total	1,439,950,901	2,771,046,942	263,037,363	3,243,671,414	7,717,706,621
Share of Area Earnings	6.61%	5.08%	2.13%	5.78%	5.33%

Table 7. REMI Model - Share of Total Earnings by Industry Due to Arab Americans by County for the Four-County Region, Using 2000 Census Employment Data

	Earnings Due to Arab-Americans				
	Macomb	Oakland	Washtenaw	Wayne	4 County
Forestry, Fishing, Mining, Other	0.03%	0.06%	0.08%	0.16%	0.10%
Utilities	0.75%	0.43%	2.90%	2.13%	1.29%
Construction	6.32%	4.29%	4.43%	3.44%	4.32%
Manufacturing	39.97%	19.67%	21.39%	27.61%	26.86%
Wholesale Trade	5.01%	8.77%	3.46%	5.98%	6.72%
Retail Trade	12.39%	11.83%	9.88%	9.06%	10.70%
Transportation and Warehousing	2.12%	1.01%	2.30%	5.50%	3.15%
Information	1.66%	4.15%	4.35%	3.38%	3.37%
Finance and Insurance	4.22%	8.64%	3.45%	4.24%	5.79%
Real Estate, Rental, Leasing	1.55%	3.49%	2.71%	1.64%	2.32%
Professional and Technical Services	8.17%	16.10%	13.21%	11.31%	12.50%
Management of Companies	1.62%	3.15%	1.58%	4.08%	3.20%
Administrative and Waste Services	3.39%	4.65%	4.21%	3.75%	4.02%
Educational Services	1.02%	1.36%	3.41%	2.08%	1.67%
Health Care and Social Services	4.18%	5.52%	9.15%	4.93%	5.15%
Arts, Entertainment, Recreation Services	0.47%	0.87%	0.63%	1.61%	1.10%
Accomodation and Food Services	2.37%	2.30%	3.66%	3.21%	2.74%
Other Services	3.28%	2.90%	3.42%	3.77%	3.35%
Public Administration	1.49%	0.81%	5.78%	2.10%	1.65%
Total Earnings	100.00%	100.00%	100.00%	100.00%	100.00%

Table 8. REMI Model - Share of Total Earnings by Industry Due to Arab Americans by County for the Four-County Region, Using 2005 American Community Survey Data

	Earnings Due to Arab-Americans				
	Macomb	Oakland	Washtenaw	Wayne	4 County
Forestry, Fishing, Mining, Other	0.03%	0.06%	0.08%	0.16%	0.10%
Utilities	0.74%	0.43%	2.90%	2.13%	1.29%
Construction	6.34%	4.29%	4.43%	3.44%	4.32%
Manufacturing	40.00%	19.66%	21.41%	27.59%	26.85%
Wholesale Trade	5.00%	8.77%	3.47%	5.99%	6.72%
Retail Trade	12.36%	11.79%	9.88%	9.03%	10.67%
Transportation and Warehousing	2.12%	1.02%	2.30%	5.51%	3.15%
Information	1.65%	4.15%	4.35%	3.37%	3.36%
Finance and Insurance	4.22%	8.65%	3.45%	4.24%	5.79%
Real Estate, Rental, Leasing	1.55%	3.49%	2.71%	1.64%	2.33%
Professional and Technical Services	8.16%	16.11%	13.22%	11.32%	12.52%
Management of Companies	1.63%	3.16%	1.59%	4.10%	3.21%
Administrative and Waste Services	3.40%	4.66%	4.22%	3.76%	4.03%
Educational Services	1.02%	1.35%	3.39%	2.07%	1.66%
Health Care and Social Services	4.19%	5.53%	9.15%	4.94%	5.15%
Arts, Entertainment, Recreation Services	0.47%	0.87%	0.63%	1.61%	1.10%
Accomodation and Food Services	2.36%	2.30%	3.66%	3.21%	2.74%
Other Services	3.27%	2.90%	3.42%	3.77%	3.35%
Public Administration	1.49%	0.81%	5.76%	2.10%	1.65%
Total	100.00%	100.00%	100.00%	100.00%	100.00%

References and Sources

Allied Media Coporation. (2006). Census Figures on Arab Population in U.S. Give Partial Glimpse at Community. Retrieved from http://www.allied-media.com/Arab-American/census.htm

Baker, Wayne. (2004). Preliminary Findings from The Detroit Arab American Study. University of Michigan. Retrieved from http://www.umich.edu/news/Releases/2004/Jul04/daas.pdf

Brittingham, Angela and G. Patricia de la Cruz. (2005). We the People of Arab Ancestry in the United States: Census 2000 Special Reports. Monograph. U.S. Census Bureau. Retreived from http://www.census.gov/prod/2005pubs/censr-21.pdf

Read, Jen'nan Ghazal. (2006). Alternative Definitions of Mexican and Arab Identity: Demographic and Socioeconomic Implications. Monograph. U.S. Census Bureau. Retreived from http://www.sabresys.com/whitepapers/ADMA_Deliverable_3.3_010406.pdf

Regional Economic Models, Inc. (2006). REMI Policy Insight Model. Retreived from http://www.remi.com/

Southeast Michigan Council of Governments (SEMCOG). (2006). Michigan's Changing Demographics: Presentation to The Michigan Association of Planners, October 13, 2006. Retrieved from http://www.semcog.org/Data/assets/MichigansChangingDemo_10_13_06.pdf

U.S. Census Bureau. (2006). 2005 American Community Survey. Retrieved from http://www.census.gov/acs/www/

U.S. Census Bureau. (2006). American Factfinder. Retrieved from http://factfinder.census.gov/home/saff/main.html?_lang=en

Wayne State University Skillman Center for Children and Center for Urban Studies. (2004). Arab, Chaldean, and Middle Eastern Children and Families in the Tri-County Area in From a Child's Perspective: Detroit Metropolitan Census 2000 Fact Sheets Series, Volume 4, Issue 2.

Zogby Worldwide, Inc. (2002). Arab American Demographics Report: A Note About the Census and the Methodology Used. Retrieved from http://www.zogbyworldwide.com/news/Readnews1.cfm?ID=579