

Economic Impact of Hispanic Community in the Cincinnati MSA

(A follow up analysis)

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Executive Summary

Cincinnati's rapidly growing Hispanic population contributes a lot to the city's economy through its purchases. If recent trends continue, the total economic impact of Hispanic spending *and output* in Cincinnati could increase dramatically in subsequent years.

This study documents the nature of Cincinnati's Hispanic population change and estimates the economic impact of hypothetical cohort of 1000 low-wage working adults in Cincinnati MSA using an input/output model of expenditure.

Key Findings:

- The aggregated annual net income spent by 1000 Hispanic working adults in the Cincinnati MSA would be \$21,480,000; this spending creates additional industry output, employment, household income, and indirect business taxes.
- The aggregated annual net income from 1000 Hispanics annually contributes a total of \$2.6 million tax benefits, \$1.9 million of which come from direct effect.
- Such net income is responsible for a total increase of \$36.1 million industry output under a type II multiplier framework, with \$27.9 million from direct- and indirect effects.
- Significant potential exists within the labor market Job market; overall 353 additional jobs would be created as a result of this spending under a type II multiplier framework, with 278 jobs from direct- and indirect effects.
- Proprietor income increases by \$1.1 million including \$616,000 from direct effect.
- Other property income increases by \$7.8 million under total effect of net annual expenditure while the initial stimulus trigger it to increase by \$5 million.
- Employee compensation increases by \$10.4 million
- Net annual expenditure of \$21,480,000 will trigger a total of \$17 million (type I) or \$21.9 million (type II) depending on the multiplier framework assumed.

The study shows the mechanisms through which the existence of undocumented workers might boost Cincinnati's overall economic prosperity



Cincinnati MSA Hispanic Population at a Glance

CONTEXT AND BACKGROUND

Recently, the Cincinnati MSA¹ has experienced rapid growth in the Hispanic population. While the growth in the Hispanic population has slowed since the early to mid 1990s, it has still grown at much faster rate than the population as a whole. Estimates vary about the number of Hispanics who live in the Cincinnati MSA: while the US Census Bureau reports this number to be about 30,000, The Hispanic Chamber Cincinnati USA estimates that the true number is in the vicinity of 70,000.

The Hispanic population is growing faster than both the African-American and total population in the Cincinnati MSA and in the nation. While there are more blacks in the Cincinnati MSA than Hispanics, the Hispanic population is growing at a much faster rate. It is predicted by *Woods and Poole* that by 2030 this population will more than double. See Figures 1 and 2.

The Hispanic population brings important characteristics to the labor force in the Cincinnati MSA. In the original study conducted by AERI (2006), we found that a larger proportion of Hispanics possess graduate degrees than the general population in the Cincinnati MSA (12% to 9%), and the proportion with bachelor's degrees was the about the same as the general population (9%), see figure 3. We believe, the Hispanics in the Cincinnati MSA are

¹ The Cincinnati MSA includes a total of fifteen counties. These are Dearborn, Franklin, and Ohio County in Indiana; Boone, Bracken, Campbell, Gallatin, Grant, Kenton and Pendleton County in Kentucky; and Brown, Butler, Clermont, Hamilton, and Warren County in Ohio.



more educated and are more likely to be employed as managers and professionals than Hispanics as a whole in the US.

Median family income (and median household income) and per capita income for Hispanics were larger in Cincinnati MSA than in the U.S. (this is consistent with statistics for total population, Whites, and Blacks). Median family and per capita income were also larger for Hispanics than for Blacks in Cincinnati MSA while per capita income for Hispanics in the U.S. was smaller than per capita income for Blacks, as shown in figures 4 and 5.

It is generally an accepted view that home ownership among Hispanic immigrants steadily increases with the amount of time spent in the country. According to a number of studies, of those arriving in the US before 1990, over 50% are homeowners; this number is around 15% for those arriving 2000 and after. This demonstrates upward mobility in the Hispanic immigrant population.

Since 1997, Hispanic Civilian Labor Force participation rate in the U.S. has been higher than the general population. In 2007 the rate was 69% for Hispanics, 66% for Whites, and 65% for Blacks. According to the US Equal Opportunity Employment Commission, Hispanics in the Cincinnati MSA were more likely to hold Official or Managerial positions than Hispanics in the general US population (11% to 5%), and were more likely to hold professional positions (11% to 6%), as shown in figure 6. More importantly, the unemployment rate for the Hispanic population declined from 1998 to 2007, a period over which it increased for blacks and whites (see figure 7).



RATIONAL FOR THIS SPECIAL STUDY

In the view of the Hispanic Chamber Cincinnati USA, the first economic impact study of the Hispanic Community in the Cincinnati MSA (highlights mentioned above; done June 2006) demonstrated the economic impact of the professional and well established Hispanics in the Cincinnati MSA; because of the changing economic conditions, this follow-up study is more concerned with predicting the additional economic impact created by recently arriving immigrants, who are much more likely to enter the job market in low wage positions. Local companies have experienced high turnover rates in these positions, leading to higher training costs and significant losses of growth opportunities. In short, the scarcity of personnel willing to put the personal effort to succeed over the long term in these physically demanding jobs is contributing to costly job turnover, which negatively impacts the sustainable economic growth of the Cincinnati MSA .

Economic Impact of low-wage Hispanics in the Cincinnati MSA

PURPOSE

This follow up special study was conducted to determine the economic impact of introducing a hypothetical cohort of 1,000 low-wage Hispanic working adults in the Cincinnati MSA. The impacts will be measured and reported via an input/output model of expenditures using data for the Cincinnati MSA reported by the Minnesota IMPLAN Group.



Assumptions & Considerations:

The presumption is that each Hispanic adult is working legally 50 weeks each year at 48 hours per week. Using hourly wage rates ranging from \$8 per hour to \$12 per hour,² the annual pre-tax aggregated income for this hypothetical cohort is estimated as \$24,000,000. This estimated aggregated income for the 1,000 Hispanic working adults was then adjusted for taxes, remittances sent back to home countries, and savings applying the following rates: average tax rate of 2.1% from the Bureau of Labor Statistics (Table 2200); remittance rate of 4.0% from the Hispanic Chamber Cincinnati USA; and a savings rate of 4.6% taken from the Bureau of Labor Statistics (BLS) expenditure survey³. After making these adjustments, the remaining amount of **\$21,480,000** is the aggregated annual net income spent by the 1,000 Hispanic working adults in the Cincinnati MSA, as shown in Table 1.

For the Cincinnati MSA economy, this \$21,480,000 in Hispanic worker expenditure creates additional industry output, employment, household income⁴, and indirect business taxes. An input-output model for the Cincinnati MSA was used to measure **how** total output, employment, and income change, **if** final demand faced by local businesses increases by a hypothetical \$21,480,000. The use of input-output multipliers then captures the round-by-round effects initiated by the 1,000 Hispanic working adults. In other words, the round-by-round effect describes the fact that an initial change in final demand (i.e., the \$21,480,000) will initiate subsequent rounds of income generation, spending, and re-spending in the Cincinnati MSA.

² Based on information provided by the Hispanic Chamber of Commerce.

³ According to the Bureau of Labor Statistics expenditure survey, 89.5% of total income earned is actually spent.

⁴ Income in the presented input-output frame is generated from three sources: i) employee compensation which describes the total payroll costs including benefits, ii) proprietors income which consist of income received for self-employment, and iii) other property income which includes income received for rents, royalties, and dividends.



the Cincinnati MSA. Ultimately, the annual *total effect* on economic activities of Hispanic workers' expenditures — that is the aggregate of all resulting subsequent economic transactions— are therefore expected to be larger than the initial economic stimulus.

For this study, the total effects are broken down into three individual effects: i) the direct effects, ii) the indirect effects, and iii) the induced effects.

The *direct effects* only measure the immediate economic response in output, employment, and income directly associated with the \$21,480,000 in net annual expenditure—the initial economic stimulus.

The *indirect effects* measure all subsequent changes in output, employment, and income among all industries. It simply accounts for the fact that all industries, in order to meet the new final demand themselves, increase their demand for intermediate inputs from other industries and for the factors of production which includes employee compensation, proprietors income, and other property income. Together, the direct and indirect effects make up the *Type I Total*, which refers to an economic framework that excludes households.

The *induced effects* measure the portion of subsequent economic activities that is attributable to the households. Households are included in the multiplier analysis and treated like an industry, based on the fact that household income and spending increases following the initial stimulus. The *Type II Total* accordingly accounts for all three individual effects, namely, the direct, indirect, and induced effects.

The increase in expenditure was broken down into 39 categories (i.e., industry sectors) including food, alcohol, housing, apparel, transportation, health care, entertainment, personal care products, reading, education, tobacco, cash, personal insurance, and miscellaneous. The



largest expenditure for Hispanics in the Cincinnati MSA was on housing, where the estimated expenditure was nearly \$2.7 million. 55% of the expenditure on shelter went to pay for owned dwellings, as opposed to rented dwellings. After the housing market, the sectors most impacted are finance and insurance, real estate and rental, motor vehicles, and food and beverages.

A summary of all anticipated changes in economic activities associated with 1,000 Hispanic working adults in the Cincinnati MSA is shown in Table 2. All results shown are in 2006 dollars, except employment impacts which are shown in actual jobs created. The direct effects of the cohort of Hispanic working adults are listed in column (1). It shows that the initial stimulus of \$21,480,000 in net annual expenditure creates the equivalent of 226 jobs in the Cincinnati MSA economy. It is further equivalent to \$5.9 million in employee compensation, \$616 thousand in proprietors income, and \$5.0 million in other property income. Additionally, the scenario creates an estimated tax benefit of \$1.9 million flowing primarily to state and local governments. All together, the sum of all value-added⁵ amounts to a total of \$13.5 million, or 62.8% of the direct effect in industry output.

Column (2), the direct effects, and column (3), type I total, then list the changes in economic activities when considering the indirect effects—which are the immediate result from including all newly created intermediate demand that follow the initial stimulus—the round-by-round effects. For instance, industry output is expected to increase to \$27.9 million with \$6.4 million of the change in industry output being attributable to the indirect effects. Note that the inclusion of the indirect effects leads to an extra 53 jobs, an additional \$1.9 million in employee

⁵ Value-added is defined as the sum of employee compensation, proprietors income, other property income, and indirect business taxes.



compensation, \$1.1 million in other property income; while an extra \$250 thousand will flow to the governments as indirect business taxes. Following the type I multiplier framework, the total number of jobs and value-added in the Cincinnati MSA region that are attributable to the 1,000 Hispanic working adults is 278 jobs and \$17.0 million in value-added.

The economic impact stemming from the 1,000 Hispanic working adults significantly increases the MSA-wide economic impacts if one includes households in the round-by-round effects as shown by the type II framework—seen in column (4), the induced effects, and column (5), type II total. Treating households in the same fashion as an economic agent as industries thus increases total industry to as much as \$36.1 million whereby the household contribution amounts to a total of \$8.2 million. Total employment under the type II framework amounts to 353 jobs, which are an additional 75 jobs versus the type I framework. Finally, employee compensation increases by \$2.5 million to a total of \$10.4 million, proprietors income by \$228 thousand to a total of \$1.1 million, and other property income by \$1.7 million to a total of \$7.8 million, while indirect business taxes increase by \$465 thousand to a total of \$2.6 million.

SPECIAL CONSIDERATION:

One anticipated critique of the above economic impact analysis might be that it appears to ignore the effect that these additional workers would have on the consumption of public goods and services past those (such as education and health-related expenses) that are included in the model.



For additional reference, one of the largest expenditures in this category is health care. Nationwide, the average insurance premium for a single adult male is about \$3700;⁶ if this amount of money were paid by the public on behalf of our entire cohort (a highest-cost scenario), the total expenditure of \$3.7 million is about one-fifth of the positive economic impact these workers would have on the economy, leaving a total net positive impact of \$18.2 million. A more realistic scenario—in line with current practices in the community--would involve employers and employees dividing the costs for the employees to participate in an HMO-type medical plan through their employers.

In order to model this more realistic scenario, we present a second set of economic impact results: for these, an additional annual health care cost of \$1800 per person has been deducted from the direct effect to go towards the financing of participation in a HMO that provides health care for our hypothetical cohorts of workers. Note that this figure is lower than the ones above because it is the employer's expenditure on health care; as stated above, we assume that additional health care costs would be borne by the workers themselves. While the overall economic impact may be reduced by five percent, it is still quite large and significant.

SUMMARY

(A) Overall, one can conclude that a hypothetical cohort of 1,000 low-wage Hispanic working adults **has a significant positive economic impact on the Cincinnati MSA economy.**

⁶ Source: National Coalition on Health Care; those workers who support a family of four typically contribute \$3400 towards a total premium of \$12,700.



SUMMARY

- (A) Overall, one can conclude that a hypothetical cohort of 1,000 low-wage Hispanic working adults **has a significant positive economic impact on the Cincinnati MSA economy.**
- (B) Depending of whether one chooses a type I or type II multiplier framework, the change in total industry output amounts to either a total of \$27.9 million or \$36.1 million; this additional output creates the equivalent of either 278 jobs or 353 jobs respectively.
- (C) Further, the significance of a hypothetical cohort of 1,000 Hispanic working adults for the Cincinnati MSA economy is reflected by the facts that their net annual expenditure of \$21,480,000 in the region would trigger a total of \$17.0 million or \$21.9 million in value-added based on the type I or type II multiplier framework respectively. More complex estimated impacts that account for additional public services yield similar results.



Table 1

Calculation of annual expenditure

Based on information from the Hispanic Chamber of Commerce, Cincinnati

1) Number of person in hypothetical simulation:

adults: 1,000

children: 500

2) Number of persons with jobs:

1000

3) Weekly work load:

48

hours

4) Annual workload (50 weeks x 48 hours):

2,400

hours / year

Hourly wages categories	Total average annual income by wage category per person	Number of workers per wage category		Total annual average income by wage category
\$8	\$19,200	100	10%	\$1,920,000
\$9	\$21,600	150	15%	\$3,240,000
\$10	\$24,000	500	50%	\$12,000,000
\$11	\$26,400	150	15%	\$3,960,000
\$12	\$28,800	100	10%	\$2,880,000
		1000		\$24,000,000
Total aggregated annual income before tax:				\$24,000,000
tax rate				2.1%
Aggregated annual income after tax				\$23,496,000
remittance rate				4.0
savings and other rates				4.6
Aggregated annual net expenditure				\$21,480,000



Table 2:
Economic Impact Summary of 1,000 Hispanic Working Adults in the Cincinnati MSA

	Direct Effects (1)	Indirect Effects (2)	Type I Total (3)	Induced Effects (4)	Type II Total (5)
Industry Output Impact (in 2006 dollars)	21,480,000	6,447,231	27,927,231	8,188,667	36,115,898
Employment Impact (in jobs)	225.8	52.5	278.3	74.9	353.2
Employee Compensation Impact (in 2006 dollars)	5,940,699	1,916,835	7,857,534	2,501,504	10,359,038
Proprietors Income Impact (in 2006 dollars)	619,376	287,156	906,532	228,449	1,134,981
Other Property Income Impact (in 2006 dollars)	5,064,438	1,066,560	6,130,998	1,690,942	7,821,940
Indirect Business Tax Impact (in 2006 dollars)	1,871,739	253,050	2,124,789	464,790	2,589,579
Total Value Added Impact (in 2006 dollars)	13,496,252	3,523,601	17,019,853	4,885,685	21,905,538



Table 3:

Economic Impact Summary of 1,000 Hispanic Working Adults, accounting for HMO participation payments

	Direct Effects (1)	Indirect Effects (2)	Type I Total (3)	Induced Effects (4)	Type II Total (5)
Industry Output Impact (in 2006 dollars)	19,680,000	5,906,960	25,586,960	7,502,466	33,089,426
Employment Impact (in jobs)	206.9	48.1	255.0	68.6	323.6
Employee Compensation Impact (in 2006 dollars)	5,442,875	1,756,206	7,199,081	2,291,881	9,490,962
Proprietors Income Impact (in 2006 dollars)	567,473	263,093	830,566	209,305	1,039,871
Other Property Income Impact (in 2006 dollars)	4,640,044	977,183	5,617,227	1,549,243	7,166,470
Indirect Business Tax Impact (in 2006 dollars)	1,714,889	231,845	1,946,734	425,841	2,372,575
Total Value Added Impact (in 2006 dollars)	12,365,281	3,228,327	15,593,608	4,476,270	20,069,878



Figure 1

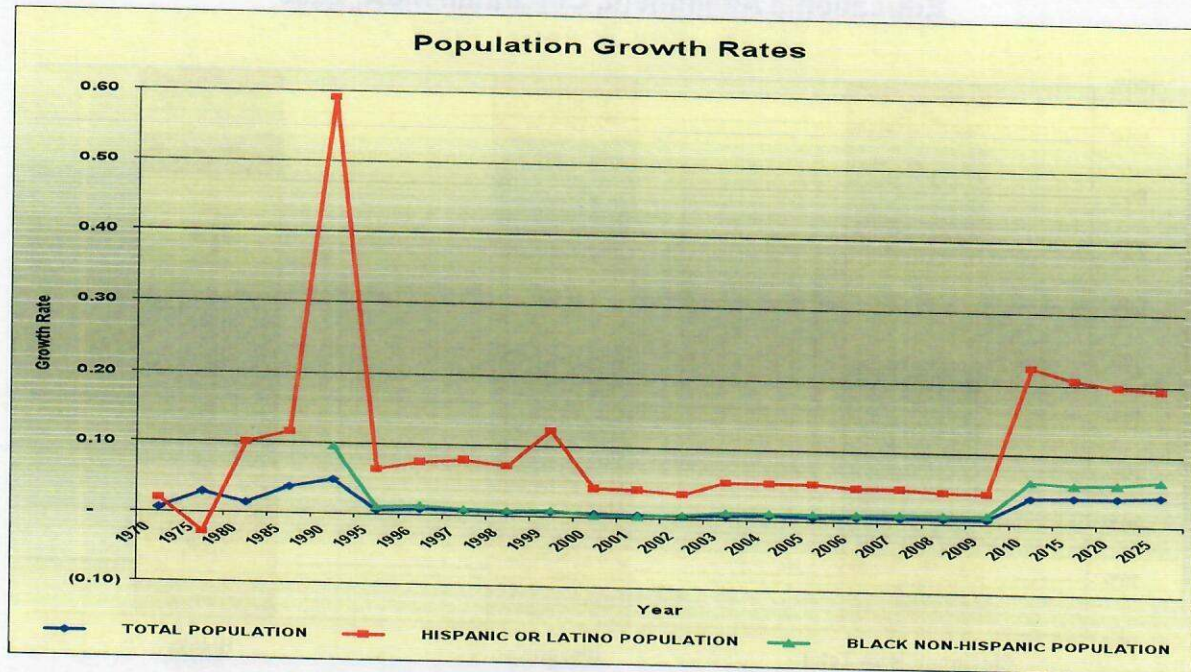


Figure 2

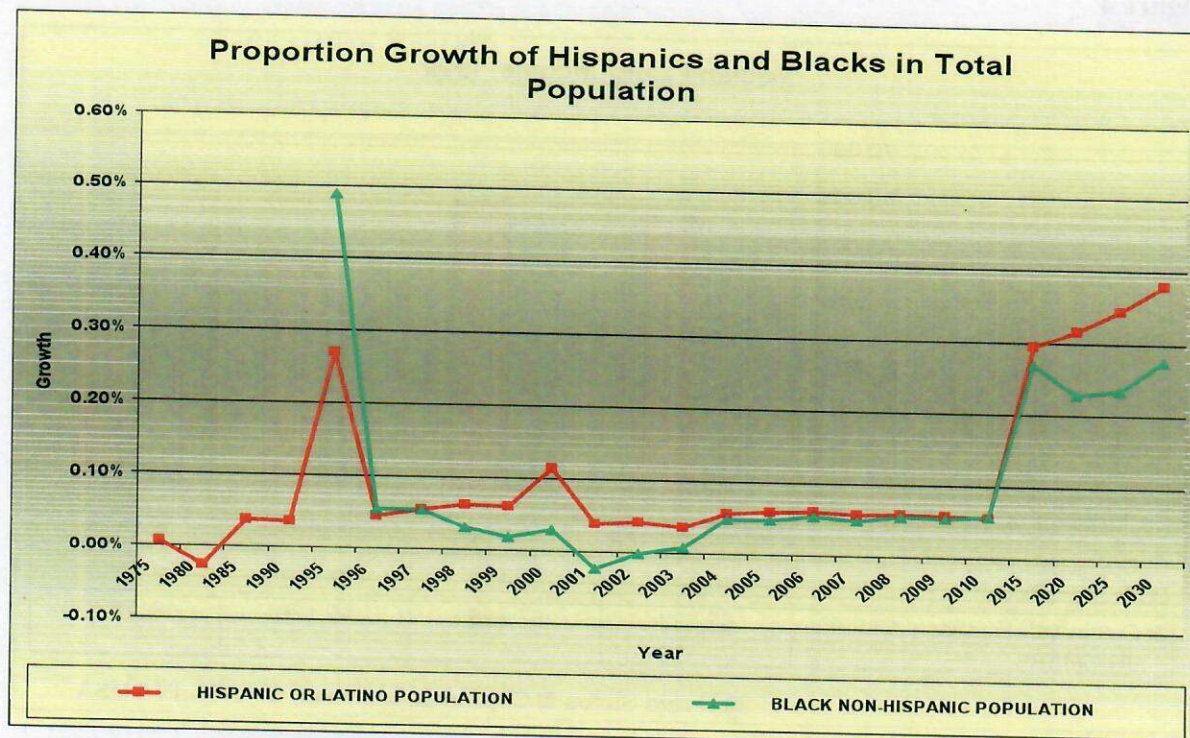




Figure 3

Educational Attainment, Cincinnati MSA, 2000

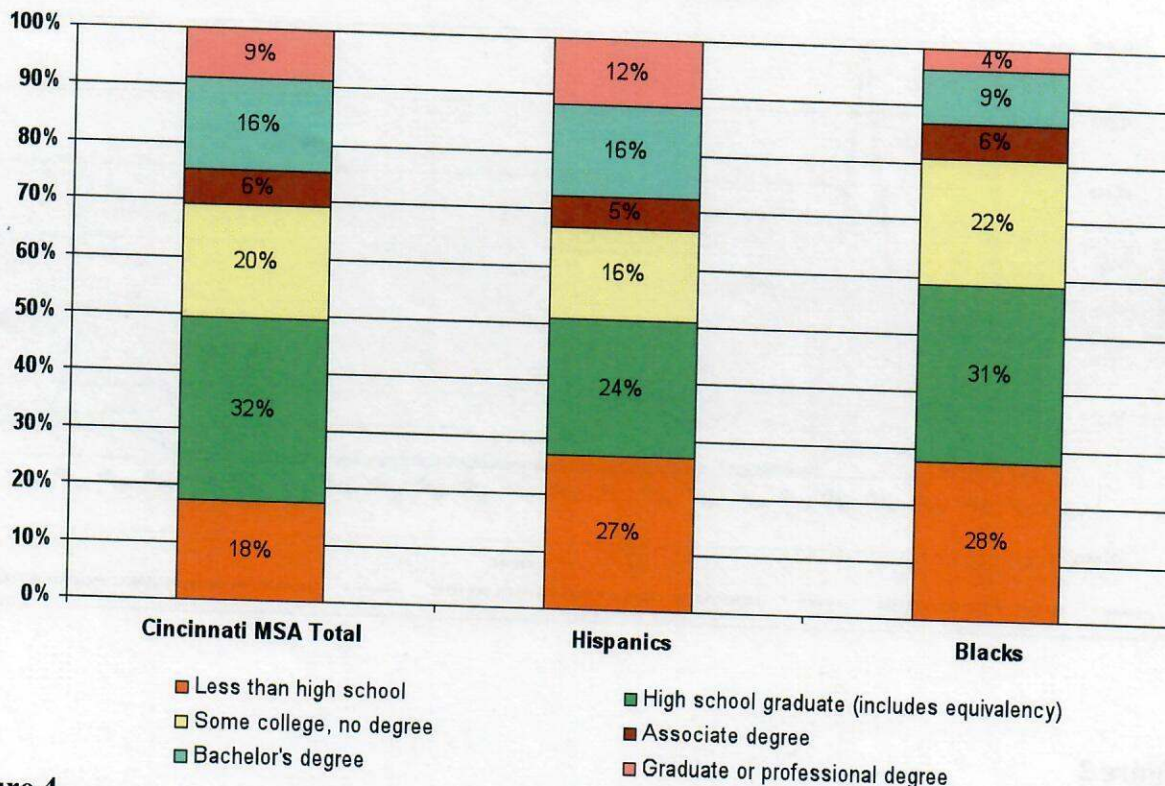


Figure 4

Median Family Income, 1999

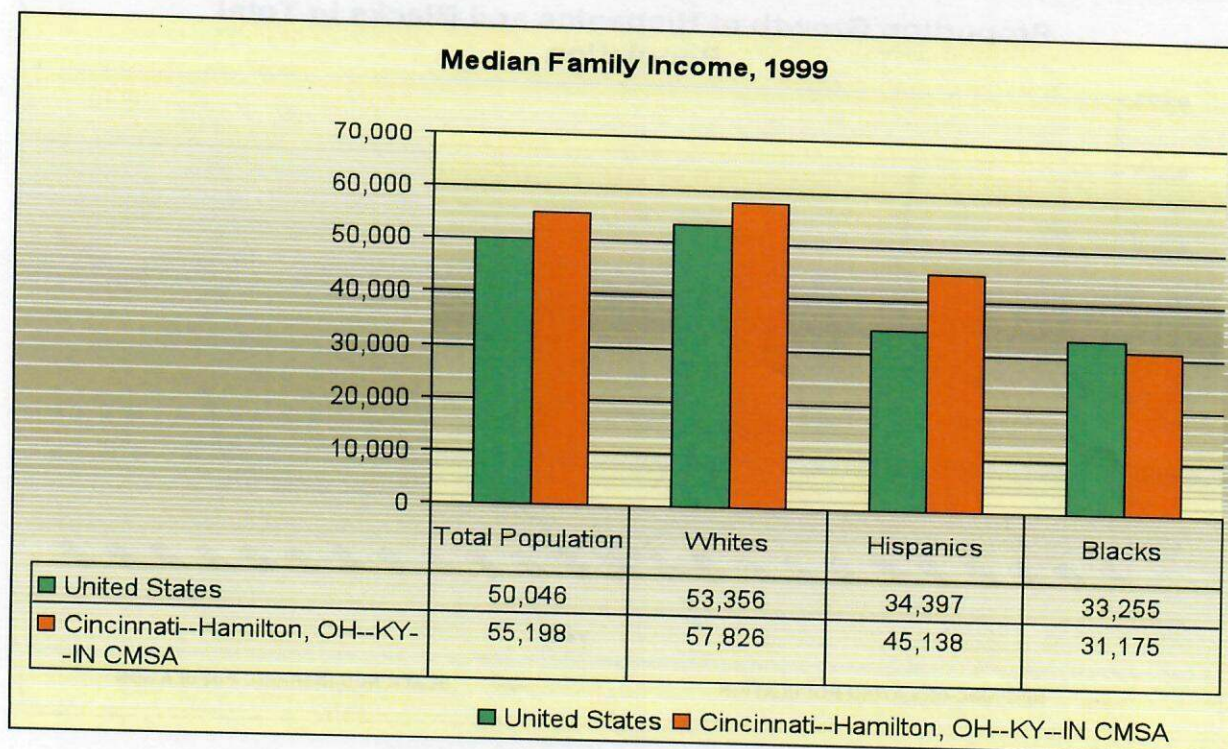




Figure 5

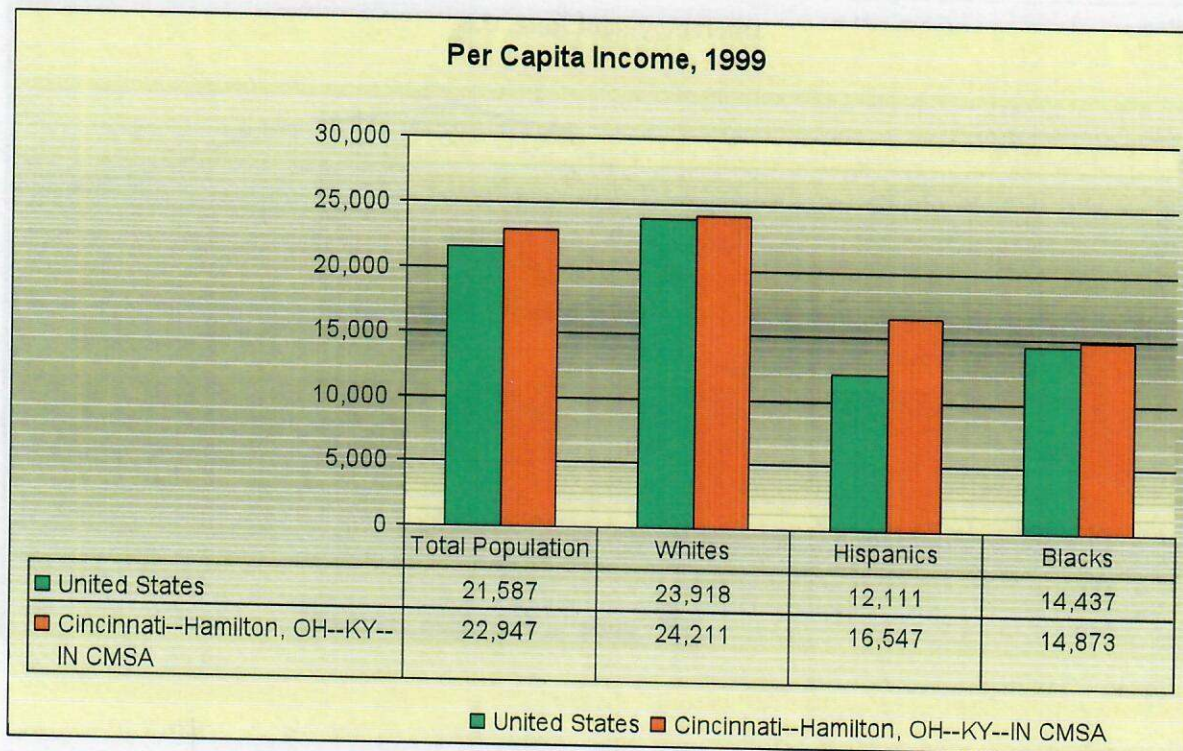


Figure 6

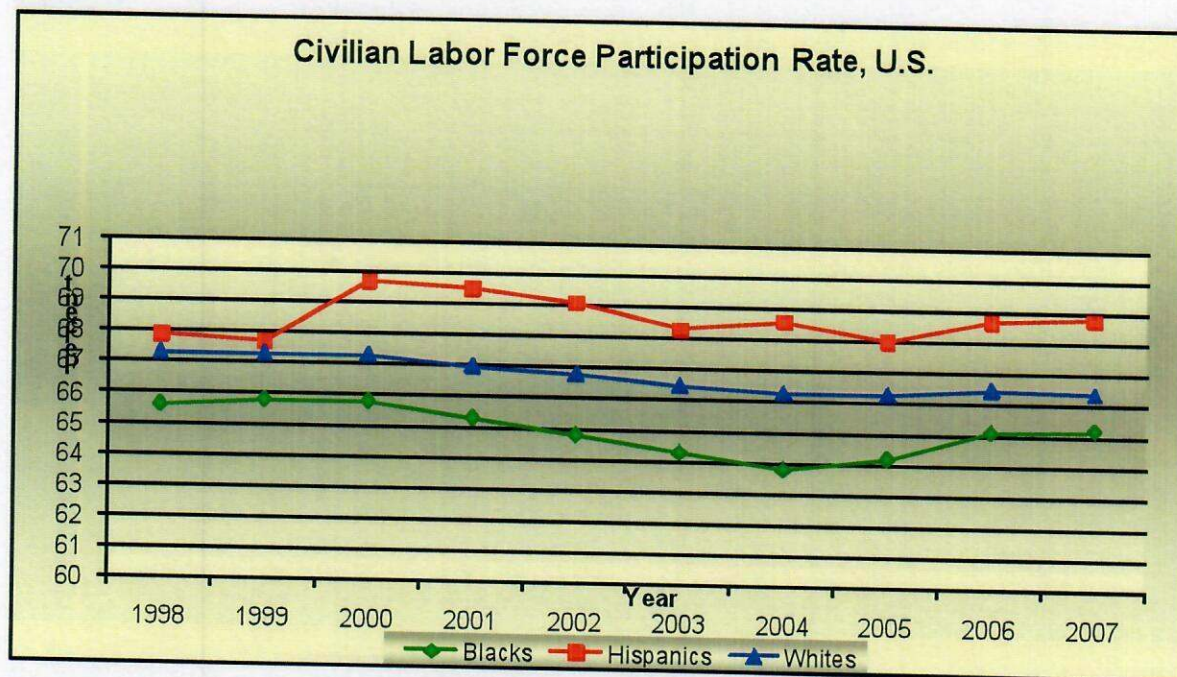




Figure 7

