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Exploring the Wealth Returns to Latino Higher Educational Attainment: Estimates of Work-Life Earnings Profiles

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Foreward

Bárbara J. Robles presents a compelling picture of the education-earnings-wealth relationship for Latino workers, further justifying nationwide attention and action to address the dearth of lower income Latino workers and the scarcity of college degreed Latinos/as.

The essential message is that the increased wealth of individual Latinos/as is not a benefit felt only by the individual or immediate family, but the benefits to society are farreaching. On a national scale, the benefits projected are staggering. Scholars make much of the knowledge-worker global race in which the United States is struggling to keep pace. Consider the impact of a highly educated U.S. Hispanic population, and not only is the global race for knowledge-worker superiority much less grave, but the American economy is significantly stronger and globally competitive.

Robles submits considerable data to support her calculations and prove her conclusions that most would agree are intuitive – that if the nation would commit itself through public investment to successfully educate the fastest growing portion of its population, the country would benefit at an immense rate of return.

Loui Olivas, President AAHHE

Abstract

A significant research gap exists in our knowledge of how educational attainment impacts wealth building and intergenerational wealth transfers among Latinos. Wealth includes earnings but is a much wider and more fundamental measure of economic mobility. The education-earnings-wealth relationship is explored by constructing estimates of social gains and losses based on work-life earnings profiles for Latino workers. Findings indicate that public investment in Latino higher education results in social benefits by increasing public revenues and contributing to national prosperity.

Keywords: Wealth mobility, human capital, educational pipeline, life-time earnings, social capital, cultural capital, biculturalism and asset-building policies.

Introduction

Economic mobility anchored by educational attainment is one of the few enduring positive relationships that researchers have investigated with little dissension among academics, politicians and policymakers. Despite the demonstrable and direct relationship between these two life-cycle outcomes, we have focused the bulk of our research lens on how education, in particular higher education, drives earnings and in turn, income for the individual, household and family units. We understand the differences in earnings between those with a high school diploma and those with a university or professional degree. We recognize the importance of education in a variety of community well-being and nation building outcomes: homeownership (Aaronson, 2000), civic and voter participation (Dee, 2004), and neighborhood safety and social cohesion (Harkness & Newman, 2003).

Latino scholars have demonstrated in ground-breaking research the consequences of public neglect for high minority-student schools, community colleges and Hispanic serving institutions (Fry, 2002; Valenzuela, 1999; Valencia, 2002). We have ample evidence of the precariousness of Latino student pipelines and the ease in which they can readily be disrupted (Chapa & De La Rosa, 2006; Gándara, 2006). As research and empirical evidence indicate, we have an accelerating wealth divide in the United States fundamentally driven by lack of educational and public resource investments in communities with a burgeoning youth population base.

This paper addresses the education-wealth relationship and explores the possible approaches to formulating a research agenda that focuses on the future consequences of limited public resources earmarked for education investment. By focusing on the education-wealth connection, our attention is diverted from the short-run educationearnings only landscape to a comprehensive sustainable research agenda that directly addresses the looming double demographic shift of a retiring baby-boomer workforce and an increasingly young minority replacement pool. Policy directions and alternatives that provide a menu of opportunities to explore at the local, state, regional and federal levels are examined. Finally, future research issues are considered within the context of global market changes.

Literature Review

An important research agenda has emerged focused on the economics of education or returns to education literature that investigates the inputs-outputs of the educational process (usually using education production functions or utility functions) and at its core views the investment decisions in education as a maximization process leading to a demand for education function (Barrow & Rouse, 2006). Although this literature has provided an abundance of important insights into the education and public expenditures process per se, it has created controversy over what type of public investments and educational policies should be pursued to enhance educational outcomes and most singularly, for whom. By and large, this literature has spawned in the U.S. a voucher-oriented policy for parental choice of schooling for children focusing on inherent ability endowments, ultimately providing the rationale for a market-driven solution to quality education.

Other research strands have emerged from the core of this optimizing approach as well, for example, the debate surrounding private returns to education versus social or public returns to education especially in the developing country economics of education literature (Moretti, 2004; Psacharopoulos & Patrinos, 2004). What this literature has failed to provide are cogent policies that would remedy the growing wealth divide driven by K-12 sorting and decades of property-based local school financing anchored by racial/ethnic segregation especially in the U.S. (Charles, Dinwiddie, & Massey, 2004). One can pursue the research results from a supply side orientation of public education expenditures and provision or one can rely on research focused on the demand for education outcomes, but it is quite clear that some schools succeed and some schools fail and one can easily recognize the zip codes where the successes occur and the failures continue.

What we have not investigated entirely is the impact education has on wealthbuilding. Instead, our research lens has been focused on wage inequality and labor market outcomes of ethnic/racial groups employing education as one of many variables explaining the persistent wage gap between non-Hispanic Whites and ethnic/racial workers (Darity, Hamilton, & Dietrich, 2002; Queneau, 2005). Recent studies of collegeeducated Black, Asian and Latino males resulted in a continuing wage gap for Black males with parents from the South and for Latino and Asian males with limited English fluency (Black, Haviland, Sanders, & Taylor, 2006). English fluency leading to wage gaps continues to be studied whereas multi-lingual fluency leading to a wage premium is missing from our education-earnings-wealth research agenda.

Emerging studies from the economics of education literature and its companion research of wage inequality yield an interesting set of new variables to add to the mix: wealth, social capital and cultural capital.¹ Despite the paucity of research directly assessing the wealth impact on educational outcomes, we do know that wealth plays a

fundamental role in educational outcomes through a variety of proxies (Aaronson, 2000; González, 2002; Harkness & Newman, 2003; Haurin, Parcel, & Haurin, 2001; Orr, 2003). From this strand of research, we find that homeownership provides a variety of "spillover" effects into the homeowner's family environment and neighborhood that incorporates a menu of wealth-based resources: social capital, civic engagement, equity leverage for future educational financing and buffering for family life-events, and perhaps most difficult to measure but nonetheless of significance is the "status" effect (Orr, 2003). Moreover, children whose parents were homeowners have a higher probability of being homeowners themselves and of completing high school (Boehm & Schlottman, 2001; Haurin et al., 2001).

Education and Wealth Mobility Indicators for Latinos

Currently, the national data on the number of Latinos in the United States stands at 48.1 million (this includes Puerto Rico) or 15.8 percent of the total U.S. population (U.S. Census Bureau, December 2007). Of the total Latino population, 60 percent are native born and 40 percent are foreign born. However, for the 25-year-old and over Latino population in 2006, 57.8 percent was foreign born and 42.2 percent was native born (U.S. Census Bureau, March 2007).

The large foreign-born component of the 25-year-old and over population has several implications for educational indicators, educational policies and economic mobility. First, most researchers do not distinguish native-born versus foreign-born educational attainment indicators among the various ethnic/racial populations in the U.S. Consequently, the overall secondary education completion rates for the Latino community rarely address the discrepancies between compulsory education policies abroad and those in the U.S. (Fry, 2005).

What these indicators reveal is a continuous Latino immigrant and transnational family connection in the Western Hemisphere that has always been with us but only recently has been the focus of media attention. Arguably, the high school completion and attrition indicators continue to be "flash-points" for deficit researchers bent on explaining a growing non-assimilationist attitude attributed to the Latino community within U.S. borders. Figure 2 indicates that for the Latino native-born, high school completion rates are significantly higher than the high school completion rates for the Latino foreign-born (Figure 3). Two issues arise from these data: 1) Latino native-born high school completion rates have risen over time indicating gains have been made but parity with African Americans, non-Hispanic Whites and Asians has yet to be reached, and 2) Latino foreign-born education completion rates (especially for those arriving in their teens and young adulthood) are a function of compulsory schooling policies abroad (Fry, 2005). Additionally, the newly arrived Latino foreign-born teens encounter a monolingual language policy pursued by U.S. public schools that do not promote multi-linguistic fluency (Orrellana, Dorner & Pulido, 2003; Valdés, 2003). This has grave repercussions for our global competitiveness today and in the future (Robles, 2004; Vasquez, 2006). Research that provides a comprehensive assessment of native-born and foreign-born educational completion indicators tells a more complex story about the role education plays in the lives of a highly mobile and young labor force (Perreira, Harris & Lee, 2006).

The completion rates for university degrees tell us something about how well students navigated secondary education and how big a pool currently exists for those continuing on to an advanced post-secondary degrees (Figure 4). The singularly low rate of native-born U.S. doctorates compared to foreign-born doctoral degree holders (Figure 5) speaks to a continuing disarray in our advanced degree program pipeline and graduate study policies. We will see that the advanced post-university degree holder population becomes an important component of private wealth as well as leaders in global competitiveness.

In comparing wealth indicators for the non-Hispanic White population and the Latino population, we find a major divide that has been increasing over time and that has been accelerated by two combined policies: favorable tax policies for the affluent and dismantling of early childhood and educational support programs for low-resourced communities (Carusso, Reynolds & Steuerle, 2008).

The data in Table 1 provide a blueprint of the current and future wealth gaps on a variety of financial assets, but equally telling are the differences in years of education between the two communities at both the mean and the median. Additionally, we have a corresponding 10 year gap in age between the non-Hispanic White population and the Latino population. The Bureau of Labor Statistics projects occupational growth in jobs requiring at least an associate's degree but report that jobs requiring a bachelor's degree with growth faster on average than all other entry-level occupations for the period 2006-2016 (Dohm & Shniper, 2007). Without an education, a living wage job is remote; without a living wage job or employment in an occupation with opportunities for upward mobility (usually dependent on incremental educational attainment), wealth accumulation

is difficult if not impossible. Ultimately, the education-earnings-wealth mobility relationship is inseparable in a knowledge-based economy and will grow more so as global markets continue to expand. What is rarely touched upon when researching the education-earnings-wealth relationship are the gains accrued to society by cultivating a well-educated and upwardly mobile labor force. The compact between government and communities concerning the investment and consumption of public and higher education is one in which government invests resources in compulsory schooling and higher education and the beneficiaries of this investment, in turn, create and produce the resources for continued good governance.

Carusso et al. (2008) report that federal expenditures as a fraction of Gross Domestic Product (GDP) for the 1980-2006 period on education and training programs declined by 50 percent. In 1980, education and training programs reached 1.04 percent of GDP and in 2006, this ratio was .54 percent. Tax subsidies for wealth and asset maintenance for the affluent have increased. According to Carusso et al. (2008):

"....those with higher incomes are granted the lion's share of benefits in many programs, including pension subsidies, incentives to acquire employee benefits, and most homeownership subsidies. Of the \$746 billion [in 2006] roughly estimated to be spent on programs that, at some level, aim to enhance mobility, well above \$500 billion goes to enhancing the mobility of those in the top two quintiles of income –people who already possess substantial private command of financial and human capital. (p.29)"

Estimating the Education-Wealth Relationship

Following the work of Sorensen, Brewer, Carroll and Bryton (1995) and Day and Newburger (2002), I estimate the work-life earnings² of Latinos with varying educational attainment characteristics. The rationale for exploring the work-life profile of Latino cohorts is to attempt to answer the question: What does society lose by ignoring educational investment in a high-growth youthful population over the life-cycle? Symmetry requires I ask: What does society gain by public investments that increase Latino participation in education in the long-run? Clearly, these questions have both quantifiable and quality-of-life factors that contribute to the overall well being and future prosperity of the country.

I employed several assumptions in order to capture the economic mobility comparisons both among Latino non-degree and degree holders and between Latinos and non-Hispanic Whites. A 40-year horizon, work-life profile is estimated using earnings stratified by educational attainment of four cohorts spanning 10 years each: the 25 to 34year-olds, the 35 to 44-year-olds, the 45 to 54-year-olds and the 55 to 64-year-olds. Current (2005\$) mean earnings are employed without discounting or inflation following census methodology.³

Additionally, I calculate the premiums for each educational attainment (degree completion) category over the no-high school degree category. The premium for Latinos with a high school diploma over those with no high school diploma is an additional \$300,000 over their work-life horizon. Significantly, the biggest educational payoff is having a university degree compared to those with no high school diploma with a premium at more than \$1 million over the work-life horizon.

Because there were no entries in the professional and doctoral degree cohorts for Hispanics and Blacks in the earnings⁴ data, I estimated the ratio of Black to White and Hispanic to White master's earnings at .83 and .88, respectively. These ratios were applied to both the non-Hispanic White professional and doctorate earnings for each cohort to create an "estimated" earnings profile for Blacks and Hispanic professional and doctorate degree holders.⁵ Clearly, even with an earnings gap of 17 and 12 percent for Blacks and Latinos compared to non-Hispanic Whites, Black and Latino professional and doctorate degree holders receive a substantial work-life premium.

Estimating work-life profiles for Latino cohorts by educational attainment allows a conservative estimate of federal income taxes paid over the 40-year period. These estimates provide a snapshot of the social loss from too few advanced degree holders among Latino workers. We know from a progressive income tax system, the greater the earnings potential, the greater the contribution to public revenues in the form of compulsory income taxes.

Latinos with a bachelor's degree pay almost twice the federal income taxes as that of a Latino high school graduate over their work-life: \$254,000 compared to \$137,000. However, the Latino professional degree holder pays almost six times that of a Latino high school graduate. Because we have seen how small the Latino professional and doctorate group is, the loss to society is substantial when multiplied by the labor force participation rates of Latino workers. An estimate of this loss can be constructed following the methodology of Sorensen et al. (1995). Using the 18-24 cohort, I assume high school completion rates remain at the 2007 levels but assume more high school completers seek more education. Sorensen et al. (1995) assumed that Latino rates of university degree holders were the same as non-Hispanic White university degree holders (for 2007 this rate is 31.9 percent). I employ the same assumption but also assume that at each level of educational attainment, the Latino high school completers can be allocated by non-Hispanic White educational attainment rates as follows: 23.7 percent bachelor's, 6.2 percent master's, 1.3 percent professional degree and .7 percent doctorate. I follow Sorensen et al (1995) in assuming that the gap between Hispanic and non-Hispanic White earnings will remain unchanged. Recall the current 2007 rate for Latino advanced degrees: total university degrees, 12.7 percent. Using the non-Hispanic White university degree attainment rate almost doubles the educational attainment characteristics of the Latino work-life profile and provides us with an estimate of higher earnings as well as an increased contribution to our national public coffers. In line with Sorensen et al (1995), my estimate indicates that \$15 billion would be gained overall from the current Latino cohort having the same educational outcomes as their non-Hispanic White counterparts. The premium gained over the current taxes paid by Latinos is \$8 billion. I estimate that Latinos currently pay \$7 billion in federal income taxes.

Similarly, I estimate that the gain to the Social Security Trust Fund if more Latino workers held advanced degrees as approximately \$1 billion. Currently, Latinos are paying \$438 million into the Social Security Trust Fund. The gains to the Social Security Trust Fund and consequently, the increasing number of baby-boomer retirees would be \$480 million.

In assessing the estimated gains to society in educating and preparing only "one" cohort over their work-life horizon, the question arises: What of succeeding cohorts? The numbers presented here are conservative in that they allow one cohort to take on the educational attainment characteristics of the non-Hispanic White population while making no assumption about earnings parity and no change to current Latino high school completion rates. If we were to apply this very conservative methodology to succeeding generations, and were to allow a modest increase in the number of high school completers to 80 to 85 percent, the public return in the form of revenues for both the national budget and the Social Security Trust Fund would be a national "treasure." The contributions of such a large infusion of dollars into our public coffers would be a windfall to our nation's prosperity by reducing the deficit and affirming the continued viability of our national Social Security program. Additionally, a young educated workforce can contribute substantially to re-investments in our infrastructure leading to spillover and multiplier effects in public investments in our rapidly changing educational agenda as well as jump start our global competitiveness by investing in 21st century work-force readiness.

These findings, using conservative and modest assumptions, indicate the "hidden" assets embodied in our Latino youth and growing labor force. The spillover effects of a wealthier and more educated Latino population has countless benefits to society as well as the increased societal savings in the form of lower expenditures on a number of currently escalating social ills: prison costs, health uninsured costs, foster care cost, juvenile system costs, and other costs associated with education investment neglect.

The policy implications for increasing educational attainment of future Latino cohorts are numerous. Divorcing local school property tax financing would be a good starting point. Promoting the collaboration of local schools with non-profit youth enrichment programs and replicating models of youth educational success modified to fit the local needs of the community is another promising measure. Middle school and high school mentoring and possible single- or multiple-class programs designed to encourage the age mixing for a strong peer mentoring and pipeline connection have not been fully assessed and may prove to be as successful as undergraduate- and graduate-mixed classes in "capturing" the younger students' imagination of continuing on to an advanced degree. University-community college-high school-middle school collaborations in cross program and research initiatives are another avenue of explicitly bringing university and community college personnel into the local public schools while ensuring more middle and high school students become familiar with university and community college campuses. Cross-institution familiarity creates a stronger pipeline and less segregation of institutions. Mother-daughter programs on college campuses have been instrumental in promoting more familiarity of institutions that have too long been viewed as "elite" and "inaccessible" to Latino students. The ability to imagine a well-educated young Latino work force is at the root of creating the community stakeholder will to insist it become a reality. We have successful "small" feeder programs across the country; what we now need to do is replicate these initiatives and promote the outcomes on a larger canvass and hold our local, state and federal public sector stakeholders accountable.

Conclusions and Future Research

As a nation, it is in our own best economic interests, in both the short and long run, to cultivate all of our national human resources. In expanding economic opportunities while closing the wealth divide in communities of color, we signal to the world that we as a nation understand the global economy. We, as a country and global leader, recognize the unique nature of our racial, ethnic and immigrant communities and the cultural and linguistic competencies they contribute to maintaining and expanding our future global economic security. When we do not address the racial and ethnic wealth inequality in the U.S., we implicitly assume and tacitly agree that it is "individual initiative" that is the culprit.

Government policies have contributed to the rapid growth in the wealth divide by expanding opportunities for the affluent through pro-active tax cuts and subsidies while at the same time, dismantling policies that safeguard educational and wealth creating opportunities for low-income communities of color. These two policies combined have intensified and increased the rate of growth in the racial wealth divide. When our government policies contribute to a growing wealth divide, which in turn feeds a growing societal divide, we diminish our position and influence as a world opinion maker and relegate countless generations of ethnic/racial youth to an intergenerational cycle of educational non-opportunities and non-economic mobility.

The results presented here indicate that there is ample room for increasing public investment in Latino higher education. To echo Sorenson et al. (1995), this would be a desirable public investment precisely because of the societal gains in the form of increased contributions to federal revenues and to the Social Security Trust Fund. What has not been quantified or addressed are the attendant "spillover" and multiplier effects of such an educational investment policy. These multiplier effects would accrue to state and local revenues, resulting in improved quality-of-life indicators, reduced outlays at the local, state and federal levels with respect to growing social costs. Future research should address not only the social gains from increased educational attainment but also the social savings of a "desirable" educational public investment initiative such as the one outlined here.



Figure 1. Total U.S. populations, 25 years old and over: 2007

Source: U.S. Census Bureau, Current Population Survey, December 2007, Table 1.



Figure 2. U.S. native-born population, 25 years old and over, 2006

Source: U.S. Census Bureau, Current Population Survey, March 2007, Table 10.



Figure 3. U.S. foreign-born, 25 years old and over, 2006

Source: U.S. Census Bureau, Current Population Survey, March 2007, Table 10.



Figure 4. U.S. population, total 25 years old and over, 2006

Source: American Community Survey, 2006 as reported in Webster, & Bishaw, 2007.



Figure 5. Doctoral degrees, total 25 years old and over, 2006

Source: U.S. Census Bureau, Current Population Survey, March 2007, Table 10.

Table 1. Annual median and means of financial products and services, all families with holdings except where noted (in thousands of real 2004 dollars)*

Financial Variable	Non-Hispanic White		Hispanic	
	Mean	Median	Mean	Median
Net worth (All Families)	\$561.4	\$140.8	\$126.6	\$15.4
Assets	\$645.0	\$220.8	\$190.9	\$44.0
Financial Assets	\$246.0	\$35.6	\$41.7	\$4.3
Checking Balances	\$7.0	\$2.0	\$2.5	\$0.9
Savings	\$16.9	\$3.6	\$4.5	\$1.0
Money Mkt. Acct.	\$56.1	\$9.8	\$17.3	\$3.0
Mutual Funds-Pooled Invest.	\$190.7	\$46.0	\$51.1	\$6.0
Certificates of Dep.	\$57.5	\$16.0	\$32.6	\$9.0
Stocks	\$173.0	\$18.0	\$80.0	\$3.0
Retirement Acct.	\$133.5	\$40.0	\$39.2	\$14.0
Non-Financial Assets	\$419.4	\$163.1	\$169.0	\$50.6
Vehicle	\$21.6	\$15.6	\$15.1	\$9.2
Primary House	\$260.1	\$165.0	\$184.8	\$127.0
Non-Residential Equity	\$329.9	\$68.2	\$135.0	\$16.0
Debts	\$111.3	\$68.8	\$75.4	\$28.2
Mortg & Home Equity Loans	\$123.9	\$97.0	\$115.5	\$92.0

Installment Loans	\$19.7	\$12.0	\$15.1	\$10.0		
Education Loan	\$17.3	\$10.0	\$13.2	\$5.0		
Vehicle Loans	\$13.9	\$11.0	\$13.8	\$11.0		
Credit Card Balances	\$5.6	\$2.5	\$3.8	\$1.8		
Other Debts	\$20.0	\$4.0	\$4.9	\$1.0		
Income (All Families)	\$79.9	\$49.2	\$39.5	\$26.7		
Age of Family Head	51.0	50.0	42.2	40.0		
Years of Education of Family Head	13.7	14.0	10.3	12.0		
*data on families with holdings (except where noted) and inflation-adjusted from						
SCF Public Tabling Extract						

Source: Survey of Consumer Finances, 2004.





Source: Author's calculations based on U.S. Census Bureau, September 2007, Table 9. Earnings in 2005 by educational attainment of the population 18 years and over, by age, sex, race alone, and Hispanic origin: 2006. Figure 7. Estimated life-work earnings premiums by racial/ethnic group and education:

2005.



Source: Author's calculations based on U.S. Census Bureau, September 2007, Table 9.

Earnings in 2005 by educational attainment of the population 18 years and over, by age,

sex, race alone, and Hispanic origin: 2006.

Table 2. Estimated 40-year work-life earnings for Black and Latino professional anddoctorate degree holders: 2005

Ethnic/Racial Population	Professional Degree	Doctorate Degree
Black	\$4,088,620	\$3,003,810
Latino	\$4,337,886	\$3,186,940

Source: Author's calculations using master's Black-White earnings ratio, .83 and

Hispanic-White earnings ratio, .88 applied to non-Hispanic White professional and

doctorate earnings over a 40 year horizon.



Figure 8. Estimated Hispanic work-life federal income taxes over 40-year horizon

Source: Author's calculations based on U.S. Census Bureau, September 2007, Table 9. Earnings in 2005 by educational attainment of the population 18 years and over, by age, sex, race alone, and Hispanic origin: 2006. Figure 9. Estimated gains/losses of federal income tax revenue for one 18 to 24-year-old cohort



Source: Author's calculations based on U.S. Census Bureau, September 2007, Table 9.

Earnings in 2005 by educational attainment of the population 18 years and over, by age,

sex, race alone, and Hispanic origin: 2006.





Source: Author's calculations based on U.S. Census Bureau, September 2007, Table 9.

Earnings in 2005 by educational attainment of the population 18 years and over, by age,

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¹ Cultural capital among economists and those research educational production functions is defined as "social class perks," such as going to the opera, attending museums, art galleries and the like. Cultural capital among social policy and ethnic studies scholar is defined as those skills and knowledge deriving from family of origin and place-based community culture. For many Latino first-generation college students, being bi-cultural is part of their cultural capital, so too is their bilingualism.

² Day and Newburger (2002) explain that the difference between "life-time" earnings and "work-life" earnings is that the former includes the probability of a "life-event" such as early death or an accident leading to disability leading to an alteration in the average number of years of work for an individual. The "work-life" estimate does not account for such "life-events."

³ See *Current Population Report*, July 2002, P23-210, The big payoff: Educational attainment and synthetic estimates of work-life earnings, (Day & Newburger, 2002) as well as Sorensen et al. (1995), Increasing Hispanic participation in higher education: A desirable public investment, *RAND Issue Paper*, (September, IP-152).

⁴ The mean and median earnings for the professional and doctorate categories were too small to be reported, but the number of professional and doctorate degree holders were reported, which allowed me to estimate the Latino Professional and Doctorate degree mean earnings.

⁵ The *Current Population Survey*, September 2007, Table 9, 2005 earnings by age, sex, race, and Hispanic origin, reports the number of degree holders but the base is too small to calculate the "actual" earnings for Black and Hispanic professional and doctorate degree holders.