

Household Income Distribution And Market Returns

Alonzo Redmon and Robert Howard

Abstract

Income distribution is a topic that has drawn much attention from many sectors of our society. Whether or not the distribution of income has become more unequal over time is an issue that can affect political decision-making, social policy, and social attitudes. Further, do stock market returns play a role in the distribution of income? It may be reasonable to hypothesize that wealthy individuals invest and earn more in equities than do poor or middle income individuals, thus contributing to income inequality. This study analyzes, by ethnic group, the issue of income distribution and the impact of the stock market returns on income distribution. Results of this study indicate that although the distribution of income has become more unequal, the stock market does not have a measurable impact.

Introduction

Inequality in income distribution has commanded tremendous attention for at least the last two decades. Policy-makers, social activists, and academicians have voiced concerns about income distribution (Drezner, 2003; Newsbatch, 2003). There are several reasons income distribution has received so much attention.

First, distribution of income is an indication of the economic welfare in a country. Although level income is not expected, and some may argue not desired, a significant gap in the income distribution can be an indication that a country is not prospering to the extent it could or should. One incentive for people to work is the belief that they will be rewarded economically and can improve their economic well being. If income inequality increases, these individuals may believe their efforts are not being rewarded and may cease to contribute their full energies in the workplace. This lack of faith in the system could cause the nation's productivity to decline (Benabou, 2000). However, there are those who believe that increasing inequality in the income distribution is only a problem if the income of the poor is decreasing (Bernstein, Mishel, and Brocht, 2000). As long as the income of the poorest is rising there is no need to be concerned about inequality in income distribution.

Second, the topic of income distribution tends to energize social activists who believe it is not just an economic issue but also a moral one (Newsbatch, 2003).

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These social justice advocates believe that it goes against the moral principles of the country to have a significant gap between rich and poor.

Third, a significant gap in the income distribution could foment social unrest (Newsbatch, 2003). If individuals at the bottom of the economic ladder believe that they are not participating in the economic prosperity of the nation and feel that they have no hope of improving their situation, they may decide to vent their frustrations, possibly, in a violent way.

Fourth, government policymakers from a political perspective may feel compelled to address the issue of income distribution if they perceive their political status being threatened. Evidence abounds of such political actions on issues of social security, welfare, and other types of social benefits (Schiffers, 2003). At the highest level of government, Treasury Secretary Henry Paulson, Federal Reserve Chairman Ben Bernanke, and President George Bush have recently addressed the issue in a forceful and thoughtful manner (Abramowitz and Montgomery, 2007; Wessel, 2007).

The Study

All of the above reasons provide justification for continued interest in income distribution. The primary purpose of this study is to evaluate income distribution in the United States during the 34 year period 1972 to 2005. The analysis will focus on income inequality among three ethnic groups – Whites, Blacks, and Hispanics. The data starts in 1972 because recorded data for Hispanics began in 1972. Then, if the distribution of income has become more unequal over time, an analysis will be performed to determine whether returns on the stock market explain, at least, some of the inequality in income distribution. Other reasons besides stock market returns have been given for explaining income inequality. However, intuitively, it does make sense to consider returns on the stock market, since it is reasonable to hypothesize that the wealthy invest and earn more from the equities market than the poor or even middle class.

This study also extends an earlier work by Redmon (1998). There are three major contributions over the previous study: Hispanics are included in the current study, the study covers a longer period of time, and stock market returns are analyzed to determine whether they can explain any income inequality within groups.

Literature Review

Numerous studies have reported on the issue of income distribution. In an evaluation of the income tax return data, Piketty and Saez (2007) conclude that the share of national income going to the top 1% of families doubled from 8% in 1980 to 16% in 2004. At the other end of the scale, a McClatchy Newspapers analysis of 2005 Census data revealed that the number of Americans living severe poverty reached a 32 year high, increasing by 26% between 2000 and 2005 (Pugh, 2007). The Center on Budget and Policy Priorities (2003) found that during the period 1979-2000 the income gap between

the top one percent and the rest of the nation widened significantly. Reasons for this increase included gains made by high income individuals on investments and, more recently, tax cuts that primarily benefited persons at the higher income levels. The Center on Budget and Policy Priorities also conducted a study with the Economic Policy Institute (2000; updated 2002) and found that the income gap between the wealthiest, the middle class, and the poorest has increased dramatically and is at the highest level in the post war era.

In a U.S. Census Bureau study entitled, “The Changing Shape of the Nation’s Income Distribution”, (Jones and Weinberg, 2000) it was also found that income distribution is becoming more unequal. Several measures of income inequality were used including the gini coefficient, share of income, and income relatives. Although the degree of inequality was different based on the measure used, all measures showed that the distribution of income is becoming more unequal.

Another study using Census data (Weinberg, Nelson, Roemer, and Welniak, 1999) and the gini index as the measure of income distribution, showed decreasing inequality in family income in the 1950s and 1960s. It also showed that inequality increased during the 1970s, 1980s, and 1990s.

A study by Redmon (1998) using income relatives as the measure of income distribution showed the inequality in the distribution of income increasing over the period 1969 to 1995 for the Black and White ethnic groups. This study compared the income of the top 5 percent of the population with the lowest income quintile.

Numerous studies have also looked at the effect of stock market returns on income distribution. Garcia-Penalosa and Turovsky (2005) analyzed the relationship between the income inequality and economic growth. Although not the central finding of their study, the authors found a positive relationship between stock market growth and income inequality. Kopczuk and Saez, (2004) looked at the effect of changing stock market patterns on the income of the wealthy. The effect of capital gains on the income of the wealthy was positive and significant prior to the Great Depression. However since 1995 there has been little effect on the income of those at the top of the income distribution, with the exception of the top one percent, from capital gains; their income growth has been due primarily to a large increase in top labor incomes, with little growth in top capital incomes. These results are consistent with an earlier study by Piketty and Saez (2003) that also looked at the effect of capital gains on income of the wealthy. The study found little evidence of significant capital gains effect on the income of the wealthy.

In summary, the literature review shows decreasing inequality in the distribution of income in the 1950s and 1960s. The income gap then increased in the 1970s, 1980s, and 1990s. A variety of measures of income inequality were used, but all showed the same result. However, the fast growing Hispanic population was not included in any of these studies. This omission is significant, since the Hispanic population is now larger than the Black population in the United States and is expected to continue to increase. It

is important, if for no other than policy reasons, that the income gap for Hispanics be examined and explained. This study included Hispanics in its examination of income distribution. In analyzing the relationship between stock market returns and the income distribution, there is no firm agreement. Some studies found a relationship between stock market returns and the distribution of income - Penalosa and Turovsky (2005) - while others did not - Kopczuk and Saez, (2004) and Piketty and Saez, (2003).

Methodology

Two measures of income inequality are used in this study: income relatives and the Gini Index. Income relatives are determined by arranging households in order from poorest to richest and dividing these households into fifths, or quintiles. Average income is then computed for each quintile, and income relatives are calculated by dividing the values of one quintile by the values of another quintile. Average income relatives were examined by ethnic group using data obtained from the Current Population Survey, Annual Demographic Supplements. Income relatives measure the relative gap between the income quintiles. The larger the income relatives the more unequal is the income distribution. Income relatives were examined between the highest and lowest quintiles and between the highest and middle (third quintile) quintiles. The third quintile is a surrogate for the middle class. Changes in income relatives were examined for the period 1972 to 2005. The period 1972 to 2005 was chosen to take advantage of data availability which included the Hispanic ethnic group. Other studies have used income relatives to examine the income distribution (Bernstein, et al., 2003; Jones and Weinberg June, 2000).

The gini index is a ratio that ranges in value between 0 and 1. For a discussion on the calculation of the gini index, see Morgan (1962), Aiger (1965), Brown and Mazzarino (1984), Damgaard and Weiner (2000), and Damgaard (2003). A value of 0 indicates perfect equality (everyone has the same income), and a value of 1 indicates perfect inequality (one household has all of the income and all other households have no income). Gini index figures were taken from the Annual Social and Economic Supplements of the U.S. Census Bureau's Current Population Survey.

There are two factors that make comparisons over time somewhat problematic. First, there was a change in data collection methodology in 1992, resulting in an increase of approximately .02 in the gini index (Census Bureau, Table IE-6). Secondly, for the year 2001 and earlier, respondents to the Census Bureau's Current Population survey were allowed to report only one racial group. After that time, respondents were allowed to choose one or more groups (Census Bureau, Footnotes). In our society, a person who has one white parent and one black parent is considered Black. Thus in 2001 and earlier, mixed race individuals generally reported themselves as Black. After that time some of these individuals continued to report themselves as Black but some classified themselves into more than one race (generally Black and White). The gini index figures shown in the tables for 2002 through 2005 are based on those persons who reported only one racial category.

The stock market returns were calculated based on closing prices of the Dow Jones Industrial Average obtained from the Yahoo website.

Analysis of Income Inequality:

Highest to lowest quintile

Table I shows average income relatives between the highest and lowest quintiles. The larger the average income relative, the more unequal is the distribution of income. In 1972, the first year of the study, Whites in the highest quintile had average income 10.18 times the average income of Whites in the lowest quintile. In 2005, the Whites in the top quintile had average income 13.85 times the average income of Whites in the lowest quintile. This represents an increase of 36.05 percent from 1972 to 2005. The 13.85 figure in 2005 was the greatest multiple experienced over the period being studied. Results indicate that the income gap for the richest and poorest Whites increased from 1972 to 2005, although the trend line is not a smooth one.

In 1972, the highest quintile for Blacks had an average income 11.77 times the average income of Blacks in the lowest quintile. In 2005, this multiple had increased to 18.15, a percentage increase of 54.21 percent. The greatest multiple for Blacks, 18.19, occurred in 2004. Similar to Whites, the income gap between the richest Blacks and poorest Blacks increased during the period. However, the income distribution for African Americans is more volatile than the income distribution for Whites.

For each year evaluated, income inequality is greater among Black households than among White households, and this gap has widened over time; income inequality was slightly greater for Blacks in 1972, but it was significantly greater in 2005. There is no question that opportunities for Blacks have increased substantially between 1972 and 2005. The entrance of Blacks into top executive positions at major corporations, the presence of Blacks in top level administrative positions in colleges and governmental agencies, and the escalation of salaries of Black athletes and media stars have greatly increased the incomes of Blacks at the top. However, there is still a large Black underclass of households that have not benefited greatly from these improved opportunities. Thus the gap between the incomes of the top and bottom quintiles has widened for Black households to a greater extent than for White households.

The highest quintile for Hispanics in 1972 had an average income of 8.05 times the average income of Hispanics in the lowest quintile. This number was 12.38 in 2005, an increase of 53.79 percent. Although the 1972 multiple was the lowest of all the ethnic groups, the 2005 multiple for Hispanics also represents the lowest multiple for all ethnic groups.

The comparatively low level of inequality among Hispanics is probably a reflection of the fact that many Hispanics are recent immigrants to this country and thus have not had the time to take advantage of educational opportunities and to advance up the corporate ladder. There are also relatively few highly paid Hispanic athletes and media stars; the great majority of Hispanics find themselves in lower paying service, agricultural, and factory jobs.

In summary, Table 1 suggests that for all three ethnic groups studied, the income gap between highest quintile and the lowest quintile increased over the period 1972 to 2005. The largest increase in the gap occurred among Blacks.

TABLE I HERE

Highest quintile versus the middle quintile

The income gap between the rich and the middle class also increased over the time period 1972 to 2005. Table II shows average income relatives, the average income of the highest quintile divided by the average income of the third quintile (middle class). As previously stated, the larger the average income relative, the more unequal is the distribution of income. Whites in the highest quintile in 1972 had average income of 2.52 times the average income of Whites in the third quintile. This figure was 3.39 in 2005, reflecting an increase of 34.52 percent. The 3.39 figure in 2005 was the greatest multiple experienced for Whites over the period studied. Table 2 indicates that the income gap between the richest and middle class Whites has increased. Income for Whites in the highest quintile has increased at a faster rate than Whites in the third quintile.

The highest quintile for Blacks in 1972 had an average income 2.93 times the average income of Blacks in the third quintile. The multiple increased to 3.51 in 2005, a 19.80 percent increase. The largest multiple between the highest and third quintile for Blacks of 3.51 was experienced in 2005.

Hispanics in the largest quintile in 1972 had an average income of 2.46 times average income of Hispanics in the middle quintile. This number was 3.16 in 2005, an increase of 28.46 percent. This was the smallest income relative of the three ethnic groups. Further, the multiple of 3.16 in 2005 for Hispanics suggests that income distribution is slightly more equal for Hispanics than Whites or Blacks. The largest multiple for Hispanics was 3.38 in 1996. During most years evaluated, income inequality was lower for Hispanic households than for White or Black households.

TABLE II HERE

Gini Ratios

Table III shows the gini ratios for White, Black, and Hispanic households. The larger the gini value, the more unequal is the distribution of income. The gini ratios confirm the results given with the income relatives: income inequality has increased for all groups between 1972 and 2005, and inequality is greatest for Black households and lowest for Hispanic households, although the gap between Black and White households is not as large.

TABLE III HERE

Data and Statistical Method

Time series analysis was used to measure the impact of stock market returns on the distribution of income, by ethnic group, for the years 1972 to 2005. We use a series of regression analyses to measure this effect. The independent variable is the return on the stock market. The dependent variable is a measure of income inequality by ethnic group. Three forms of the dependent variable were used in the analysis. The first is calculated by dividing the average income of those in the highest quintile by the average income of those in the lowest quintile. The second is calculated by dividing the average income of those in the highest quintile by the average income of those in the middle quintile. The third is the gini Index. Our hypothesis is that income inequality is positively related to stock market returns. Poor people, primarily those in the bottom quintile, do not generally invest in the stock market, while many of those in the top quintile are market investors. Thus, when stock market returns are high, the incomes of those in the bottom quintile are largely unaffected while many of those in the top quintile have substantial income increases. Thus, we expect that the distribution of income will become more unequal when the market returns are high.

Results

The regression results are shown in Table IV through Table XII, and the variables used in the study are listed in Table XIII. Tables IV, V, and VI have highest income to lowest income relatives, by ethnic group, as the dependent variable and stock market returns as the independent variable. Tables VII, VIII, and IX have highest income to middle income relatives, by ethnic group, as the dependent variable and stock market returns as the independent variable. Tables X, XI, and XII have the gini index, by ethnic group as the dependent variable and stock market returns as the independent variable.

Only two of the independent variables are significant in any of the regressions. The F-statistics indicate that the null hypothesis that the regression coefficients are jointly equal to zero cannot be rejected at the .01 level of significance in these cases. The overall fit, as measured by R^2 , is low for all regressions.

In Regression 1 (see Table IV) the highest quintile to lowest quintile income relative for Whites was regressed against the stock market return. The coefficient of the stock market return was positive, but not significant, at the .01 level. This suggests that the return on the stock market does not have a statistically significant impact on the distribution of income between Whites in the highest quintile and Whites in the lowest quintile.

TABLE IV HERE

In Regression 2 (see Table V) the highest quintile to lowest quintile income relatives for Blacks was regressed against stock market returns. The coefficient of the

stock market return was positive, but not significant, at the .01 level. This suggests that the return on the stock market does not have a statistically significant impact on the distribution of income between Blacks in the highest quintile and Blacks in the lowest quintile.

TABLE V HERE

In Regression 3 (see Table VI), the highest quintile to lowest quintile income relative for Hispanics was regressed against the stock market return. The coefficient of the stock market return was positive, but not significant, at the .01 level. This suggests that the return on the stock market does not have a statistically significant impact on the distribution of income between Hispanics in the highest quintile and Hispanics in the lowest quintile.

TABLE VI HERE

In Regression 4 (see Table VII), the highest quintile to middle quintile income relative for Whites was regressed against the stock market return. The coefficient of the stock market return was positive, but not significant, at the .01 level. This suggests that the return on the stock market does not have a statistically significant impact on the distribution of income between Whites in the highest quintile and Whites in the middle quintile.

TABLE VII

In Regression 5 (see Table VIII), the highest quintile to middle quintile income relative for Blacks was regressed against the stock market return. The coefficient of the stock market return was positive, but not significant, at the .01 level. This suggests that the return on the stock market does not have a statistically significant impact on the distribution of income between Blacks in the highest quintile and Blacks in the middle quintile.

TABLE VIII HERE

In Regression 6 (see Table IX), the highest to middle quintile income relative for Hispanics was regressed against the stock market return. The coefficient of the stock market return was positive, but not significant, at the .01 level. This suggests that the return on the stock market does not have a statistically significant impact on the distribution of income between Hispanics in the highest quintile and Hispanics in the middle quintile.

TABLE IX HERE

In Regression 7 (see Table X), the gini coefficient for Whites was regressed against the stock market return. The coefficient of the stock market return was negative,

but not significant, at the .01 level. This suggests that the return on the stock market does not have a statistically significant impact on the distribution of income for Whites.

TABLE X HERE

In Regression 8 (see Table XI), the gini coefficient for Blacks was regressed against the stock market return. The coefficient of the stock market return was negative and significant at the .05 level. This suggests that the return on the stock market is negatively related to income inequality among Black households, a result we had not expected and have not been able to explain.

TABLE XI HERE

In Regression 9 (see Table XII), the gini coefficient for Hispanics was regressed against the stock market return. The coefficient of the stock market return was negative, but is significant at the .01 level. This suggests that the return on the stock market is negatively related to income inequality among Hispanic households, again, a result that we had not expected and have not been able to explain.

TABLE XII HERE

In each of the nine regressions above, stock market returns were based on the closing prices of the Dow Jones Industrial Average. An alternative proxy for stock market return is the return on the S&P 500 index. We repeated each of our regressions using the return on the S&P 500 index as the independent variable. The coefficient of the dependent variable was not statistically significant in any of the nine regressions. Thus, the weight of the evidence from our analysis is that returns on the stock market do not have an impact on income inequality.

Conclusion

The income gap decreased in the 1950s and 1960s (Weinberg, Nelson, Roemer, and Welniak, 1999). The income gap then increased in the 1970s, 1980s, and 1990s (Jones and Weinberg, 2000; Weinberg, Nelson, Roemer, and Welniak, 1999). The latter statement is consistent with the results of this study.

Income inequality increased for all ethnic groups during the 1972 to 2005 period, and income inequality was highest among Black households. The increasing inequality among Black households may be related to increased educational and occupational opportunities for Blacks, resulting in substantial income increases for highly motivated and aggressive individuals who are able to take advantage of those opportunities. It is also interesting to note that although income relatives, as well as gini coefficients, were lower for Hispanics than for Whites and Blacks, the percentage increase in income relatives was approximately the same for Hispanics as for Blacks.

In analyzing the relationship between the income distribution and stock market returns, there was no statistically significant relationship found between the two variables. Several regressions were performed using two alternative independent variables – the return on the market based on the Dow Jones Industrial Average and return on the market based on the Standard and Poors' 500 Index. Alternative measures of income inequality were also used – two income relatives and the gini index. The weight of the evidence is that income inequality is not related to stock market returns.

Other reasons that have been given for the inequality in the income distribution include globalization, the decline in manufacturing jobs along with the expansion of lower paying service jobs, immigration, the lower value of the minimum wage, and fewer and weaker unions (Bernstein, et al., 2000; Jones and Weinberg, 2000). Lloyd-Ellis (1999) also argues that a lack of educational attainment by those in the lower income quintiles accounts for the increasing gap in the income distribution. How each of these factors affect the various ethnic groups are fertile grounds for future research.

There are limitations to this study that should be recognized. Regional and other factors that may affect income distribution were not considered. For example, a state-by-state analysis by ethnic groups may give additional insight into the income gap. Further, the period chosen in this study was chosen arbitrarily to match data availability. It may be more insightful to consider sub-periods that are more closely linked to economic and political events. For example, examining the income distribution by presidential administrations may give a better perspective on possible causes for the income gap. Overall a deeper analysis needs to be done to determine reasons for disparities in various periods and among ethnic groups.

Table I. Income Relatives – Income Of The Highest Quintile Divided By Income Of The Lowest Quintile

<u>Year</u>	<u>White</u>	<u>Black</u>	<u>Hispanic</u>
2005	13.85	18.15	12.38
2004	13.77	18.19	12.38
2003	13.72	17.30	12.59
2002	13.42	17.74	12.77
2001	13.54	16.23	12.15
2000	13.28	15.44	12.01
1999	12.72	16.33	11.81
1998	12.90	16.28	13.81
1997	13.04	15.25	13.64
1996	12.47	16.31	13.01
1995	12.17	15.67	13.08
1994	12.68	16.61	13.46
1993	12.52	16.93	12.46
1992	11.41	16.12	11.87
1991	11.06	15.83	11.68
1990	11.07	15.81	11.48
1989	11.20	15.47	12.35
1988	11.07	15.08	12.87
1987	11.07	15.32	12.82
1986	10.87	15.49	11.60
1985	10.57	13.66	11.03
1984	10.18	13.40	11.53
1983	10.04	13.45	10.72
1982	10.06	13.05	10.76
1981	9.57	12.43	9.64
1980	9.54	12.57	10.08
1979	9.79	12.04	9.54
1978	9.59	11.74	9.11
1977	9.46	11.09	8.75
1976	9.36	10.62	9.03
1975	9.30	10.91	9.01
1974	9.19	10.76	8.16
1973	9.82	11.12	8.20
1972	10.18	11.77	8.05

Source: Author's calculations based on U.S. Census Bureau; Current Population Survey; Annual Demographic Supplements.

Table II. Income Relatives – Income Of The Highest Quintile Divided By Income Of The Third Quintile

<u>Year</u>	<u>White</u>	<u>Black</u>	<u>Hispanic</u>
2005	3.39	3.51	3.16
2004	3.34	3.45	3.28
2003	3.33	3.41	3.25
2002	3.28	3.53	3.30
2001	3.37	3.28	3.19
2000	3.33	3.24	3.20
1999	3.26	3.41	3.16
1998	3.23	3.35	3.36
1997	3.26	3.22	3.33
1996	3.18	3.51	3.38
1995	3.14	3.35	3.34
1994	3.21	3.52	3.35
1993	3.15	3.59	3.22
1992	2.90	3.38	2.99
1991	2.86	3.25	2.95
1990	2.87	3.26	2.91
1989	2.90	3.25	2.96
1988	2.81	3.41	3.02
1987	2.79	3.36	3.08
1986	2.75	3.26	2.89
1985	2.71	3.16	2.83
1984	2.66	3.22	2.80
1983	2.65	3.15	2.75
1982	2.62	3.06	2.80
1981	2.54	3.07	2.60
1980	2.52	3.05	2.69
1979	2.55	2.98	2.63
1978	2.53	2.96	2.53
1977	2.50	2.98	2.54
1976	2.48	2.86	2.54
1975	2.48	2.83	2.54
1974	2.47	2.79	2.45
1973	2.50	2.85	2.45
1972	2.52	2.93	2.46

Source: Author's calculations based on U.S. Census Bureau; Current Population Survey; Annual Demographic Supplements.

Table III. Gini Coefficients

<u>Year</u>	<u>Whites</u>	<u>Blacks</u>	<u>Hispanics</u>
2005	.462	.481	.440
2004	.460	.477	.440
2003	.458	.473	.445
2002	.455	.481	.450
2001	.460	.463	.443
2000	.457	.458	.444
1999	.451	.470	.437
1998	.450	.466	.460
1997	.453	.458	.458
1996	.446	.479	.456
1995	.442	.468	.455
1994	.448	.477	.459
1993	.444	.484	.447
1992	.423	.470	.430
1991	.418	.464	.427
1990	.419	.464	.425
1989	.422	.461	.430
1988	.416	.468	.437
1987	.415	.468	.441
1986	.415	.464	.424
1985	.411	.449	.418
1984	.405	.450	.420
1983	.404	.448	.413
1982	.403	.442	.417
1981	.397	.440	.398
1980	.394	.439	.405
1979	.396	.433	.396

Source: U.S. Census Bureau; Historical Income Tables – Households, Table H-4 Gini Ratios for Households by Race and Hispanic Origin - 2006

Table IV. Regression 1

$$WHL = b_0 + b_1 \text{Return}$$

Variable	Coefficient	t-statistic	Significance
CONSTANT	.005	.023	.982
RETURN	.008	.421	.677

R² = .005

F-Value = .177

Table V. Regression 2

$$\text{BHL} = b_0 + b_1\text{Return}$$

Variable	Coefficient	t-statistic	Significance
CONSTANT	-.018	-.103	.919
RETURN	.007	.621	.539

$$R^2 = .012$$

$$\text{F-Value} = .386$$

Table VI. Regression 3

$$\text{HHL} = b_0 + b_1\text{Return}$$

Variable	Coefficient	t-statistic	Significance
CONSTANT	-.175	-.972	.338
RETURN	.025	1.492	.146

$$R^2 = .065$$

$$\text{F-Value} = 2.225$$

Table VII. Regression 4

$$\text{WHM} = b_0 + b_1\text{Return}$$

Variable	Coefficient	t-statistic	Significance
CONSTANT	-.032	-.131	.897
Return	.043	.502	.619

$$R^2 = .008$$

$$\text{F-Value} = .252$$

Table VIII. Regression 5

$$\text{BHM} = b_0 + b_1\text{Return}$$

Variable	Coefficient	t-statistic	Significance
CONSTANT	-.106	-.264	.794
RETURN	.061	.491	.627

$$R^2 = .007$$

$$\text{F-Value} = .241$$

Table IX. Regression 6

$$\text{HHM} = b_0 + b_1\text{Return}$$

Variable	Coefficient	t-statistic	Significance
CONSTANT	-.204	-.781	.441
RETURN	.100	1.133	.265

$$R^2 = .039$$

$$\text{F-Value} = 1.285$$

Table X. Regression 7

$$\text{WG} = b_0 + b_1\text{Return}$$

Variable	Coefficient	t-statistic	Significance
CONSTANT	.423	77.696	.000
RETURN	-.014	-.090	.928

$$R^2 = .000$$

$$\text{F-Value} = .008$$

Table XI. Regression 8

$$BG = b_0 + b_1 \text{Return}$$

Variable	Coefficient	t-statistics	Significance
CONSTANT	.459	113.336	.000
RETURN	-.249	-2.116	.042

$$R^2 = .123$$

$$F\text{-Value} = 4.479$$

Table XII. Regression 9

$$HG = b_0 + b_1 \text{Return}$$

Variable	Coefficient	t-statistics	Significance
CONSTANT	.431	84.174	.000
RETURN	-.448	-3.011	.005

$$R^2 = .221$$

$$F\text{-Value} = 9.068$$

Table XIII. Variables Used In The Study

WHL: The average income of the top quintile for Whites divided by the average income of the lowest quintile for Whites.

BHL: The average income of the top quintile for Blacks divided by the average income of the lowest quintile for Blacks.

HHL: The average income of the top quintile for Hispanics divided by the average income of the lowest quintile for Hispanics.

WHM: The average income of the top quintile for Hispanics divided by the average income of the middle quintile for Hispanics.

BHM: The average income of the top quintile for Blacks divided by the average income of the middle quintile for Blacks.

HHM: The average income of the top quintile for Hispanics divided by the average income of the middle quintile for Hispanics.

Return: The return on the stock market.

WG: The gini coefficient for Whites.

BG: The gini coefficient for Blacks.

HG: The gini coefficient for Hispanics.

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